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BENFLEET, CANVEY ISLAND  
and RAYLEIGH



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HEALTH REPORT

for the year

1953



# Annual Report of the Medical Officer of Health for the Year 1953

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PUBLIC HEALTH DEPARTMENT,  
LONDON ROAD,  
HADLEIGH, ESSEX.

To the Chairman and Members of each of the Urban District Councils  
of Benfleet, Canvey Island and Rayleigh.

Ladies and Gentlemen,

I have the honour to present, for your consideration, my Annual Report on the health and sanitary circumstances of each of your Urban Districts for the year 1953, prepared in accordance with the requirements of Ministry of Health Circular 1/54 dated 12th January, 1954. This issue represents my twenty-sixth Annual Report for the Canvey Island Urban District and my twenty-fourth in respect of the Benfleet and Rayleigh Urban Districts.

I am very pleased to be able to report most favourably on the health of the area during 1953. There was no serious outbreak of infectious disease and the infant mortality rate showed an overall improvement—the combined rate being below that of the Country as a whole. The weather for the month of February was very severe and was undoubtedly associated with the high sickness rate of that month. Otherwise the incidence of sickness throughout the year is believed to have been minimal. The death rate from tuberculosis continued to fall. Other fatal cases among infectious diseases involved a four month old child from Hadleigh who died from complications associated with measles, and a child aged 5 years from South Benfleet who died from an unusual complication of Chicken Pox. I am glad to say that there were no maternal deaths during the year.

Complacency, however, is an attitude of mind and purpose which must be shunned with determination and vigour. Advocates of health through prevention can only tackle the future on the strength of the past, and they must not fail in their responsibility to maintain the distinctive value of preventive medicine within the Profession. A well known medical officer once stated that like preventive action everywhere, as it is successful, so is it unrecognised. The family that never goes wrong is no more news than the home accident that never happens. The child who fails to develop rickets or diphtheria, or who is kept above the border line of malnutrition or neglect; the tuberculosis contact who is not infected; and the aged person who does not die neglected and lonely are no more news than the breast-fed baby or the healthy school child. The fact that a good deal of work has often been carried out by the health worker in order to maintain this unevent-

ful state of affairs is of equally poor news value, and it is frequently unrecognised as it is unappreciated.

### National Health Service

With regard to the National Health Service, there are few who decry the principle of such a scheme. Those who do are generally ignorant of the facts. On a long term policy the available benefits are fully comprehensive and far exceed the ability of the average individual to pay for them. Whilst in health, the demands of most of us on the Service are few, but the scheme is a great blessing to the unfortunate chronic invalid and the ageing, into which categories we all are destined to find ourselves some day. The main criticism of the Service, however, is in the field of finance and it must be conceded that cost can only be harnessed to the national pocket by domestic re-organisation within the Service. Indeed, it is the high cost of the Health Service in general and the curative section in particular which is leading to increasing emphasis from many directions on the importance of preventive medicine. Here lies the key to a healthier nation at a minimum cost. Each year the bill for the Health Service gets larger, and in the year 1951/52 the total gross cost amounted to £434,000,000, of which all but £62,000,000 had to be provided by the Exchequer. Despite the introduction of the shilling prescription fee and initial payment for dental treatment in 1952, the estimate for National Health Service expenditure for 1952/53 showed an anticipated increase of £38,000,000. It is interesting to observe that in 1951/52 the curative services—hospitals, general practitioners, pharmaceutical and dental—absorbed 84½% of the total National Health Service expenditure, whilst that expended by Local Health Authorities on the preventive services amounted to only 8½%. The aim of preventive medicine is, of course, the prevention of disease and sickness, and my view is that greater emphasis on prevention will lead to a substantial relief to the national pocket. It certainly costs less to prevent disease than to treat it.

### Thirty Years of Progress

The easiest way to appreciate the remarkable progress which has been made in regard to the nation's health is to reflect on the recent past. Great advancements have been made in the last 30 years—during the period of my own personal experience—and in 1924 things were far different to what we find them today. The following comparative figures showing the number of deaths from certain infectious diseases for England and Wales should make us thankful that our children are living in an age when so much is done to safeguard their health and to restore them when ill :—

	1924	1953*
Diphtheria .. .. .	2,501 ..	23
Diarrhoea and Gastro-enteritis ..	7,460 ..	709
<i>(Under two years)</i>		
Influenza .. .. .	18,986 ..	6,465
Measles .. .. .	4,834 ..	244
Scarlet Fever .. .. .	888 ..	27
Tuberculosis .. .. .	41,103 ..	8,902
Whooping Cough .. .. .	3,983 ..	243

\* Provisional Figures

## **Diphtheria**

The triumph over diphtheria is universally attributed to mass immunisation and the continuance of a high immunisation rate is absolutely essential if the suppression of this disease is to be maintained. If parents who do not bother to have their children immunised could remember that in the 1930's there was an average of 2,800 children dying every year from diphtheria and that as late as 1941 there were 2,640 diphtheria deaths and 50,000 cases, they might realise the danger to which their child would be exposed if every parent assumed the same attitude. Advancement in the prevention of diphtheria began in 1939 and within 13½ years over 10 million children had been protected by immunisation.

## **Diarrhoea under Two Years**

Diarrhoea and Gastro-enteritis are common causes of death in young children and particularly among those under two years of age, and in earlier years a substantial proportion of infant mortality could be traced to these causes. The great improvement in both ante-natal and post-natal care, coupled with improved artificial feeding facilities, has been largely responsible for the reduced number of deaths under this heading.

## **Influenza**

Influenza, whilst not notifiable, is a serious infectious disease and there is always a possibility that it might strike, and strike hard, during the winter months when resistance to illness particularly among the elderly, is at its lowest. Mortality in 1952 throughout England and Wales was one of the lowest for many years, although there were over 15,000 fatal cases in 1951 and over 6,000 in 1953. Deaths from pneumonia are also very much higher when influenza is prevalent; there being over 12,000 in 1951 and nearly 21,000 in 1953. This disproportionate number of pneumonia deaths was undoubtedly associated with the severe weather conditions experienced in the early part of the year. Let us not be unmindful of the serious influenza epidemic of 1918 when over 112,000 people in this Country died of the disease apart from greater numbers on the Continent. In that black year there were also nearly 60,000 deaths from Pneumonia in England and Wales. We need to take care against further serious attacks which may well be localised.

## **Atmospheric Pollution—"Smog" & "Smell"**

Climatic conditions play a large part in assisting the spread of the virus of influenza, and in recent years the subject of atmospheric pollution has claimed much attention, particularly in the industrial areas. Since the "Smog" attacks of December, 1952, renewed interest and concern has arisen, both within the medical profession and among the general public. For many years it has been known that air pollution can have a harmful effect on health, but the freak conditions which caused so many deaths in December of 1952 made us all appreciate the position more fully and the urgent need to initiate effective remedial measures. The meteorological conditions which led to the London



“ Smog ” were as follows :—a layer of surface cold air was overlaid by a blanket of warmer air which, in the state of complete calm which prevailed, prevented any escape of polluted air. The rapidity with which these unusual atmospheric conditions reacted on those who had respiratory weakness was amazing. About 4,000 people are known to have died as a result, chiefly during the period 5-16 December, 1952. Of those who unfortunately died, there were three times as many deaths among babies between 4 weeks and one year of age and those over 55 years. Among the fatal cases of other ages they were twice as many as the normal incidence of mortality. On the 21st July, 1953 the Minister of Housing and Local Government in conjunction with other Ministers, set up a Committee under the Chairmanship of Sir Hugh Beaver with the following terms of reference—

“ To examine the nature, causes and effects of air pollution and the efficiency of present preventive measures ; to consider what further preventive measures are practicable ; and to make recommendations.”

The Interim Report of this Committee was published on the 18th November, 1953 and dealt with the subject on a nation-wide basis. The final report is still awaited. Further information has recently become available in the publication of a report by a Committee of Departmental Officers and Expert Advisers appointed by the Minister of Health under the heading “ Mortality and Morbidity during the London Fog of December, 1952 ”. This report reveals that 90% of the London fatalities were over 45 years of age and 60%—70% were over 65 years. It also states that while the available evidence does not allow of a clear indictment of any one constituent of the fog, the conclusion is inescapable that the excessive mortality and increased incidence of respiratory illness during and immediately after the fog were the result of irritation of the respiratory tract by contaminants of the fog. The irritants mainly responsible were probably those derived from the combustion of coal and its products. Their lethal effects were almost wholly exercised in persons already suffering from chronic respiratory or cardio-vascular disorders. The report stresses the increase in sulphur dioxide in the atmosphere during the fog. The harmful effects of this were probably appreciably reinforced by sulphur trioxide dissolved as sulphuric acid in fog droplets. The evidence pointed to some toxic or irritant agent in the fog producing a spasm of the air passages and increased fluid secretions leading to a shortage of oxygen, thus precipitating heart failure.

The recent development of Oil Refineries in the Thames Estuary has presented new problems to Public Health officials in some areas on the north bank of the River.

It was from about July onwards that the “ Smell ” nuisance became apparent. Usually, a smell akin to that of oil and onions sweeps across the area in waves in the late evening or early morning, according to the prevailing atmospheric conditions. All local authorities adjacent to the north side of the Estuary seem to be affected and numerous representations have been made to the Ministry of Housing and Local Government in the matter. As a result of local representation, Mr. Geo. Tiplady, M.Sc., F.R.I.C., Alkaline Inspector to that

Ministry, has visited my office on several occasions and discussed the problem with representative officials of Benfleet, Canvey Island and Rayleigh Councils. In these discussions it was pointed out that "experience has shown that immunity from complaint of odour cannot be guaranteed where large oil refineries are involved, and that trouble is likely to arise during the initial operation of new processes and until the optimum working technique has been established."

A communication from the Principal Medical Officer of the Ministry of Health was received in October last advising me that the waste gases from the refineries had no obviously harmful effect on human or vegetable life at ground level.

Air pollution, in the light of the tremendous industrial development of this Country, is certainly a subject which will require considerable research before the problem can be adequately dealt with.

### **Measles and Whooping Cough**

These are two of the most common infectious diseases of childhood today and have been more rigidly under control since notification commenced in 1940. However, although mortality has been reduced through the introduction of penicillin and other modern remedies, the rate of incidence remains high generally, and in the case of measles usually follows a biennial epidemicity.

### **Tuberculosis—Mass X-ray and B.C.G.**

Tuberculosis mortality, whilst showing a tremendous improvement since 1924, still prevails in great strength, and the loss of nearly 9,000 lives in 1953, usually among the young and wage earning, should remind us that much remains to be done. Of recent years, with the introduction of improved methods of diagnosis, including the use of mass radiography, notifications have increased, and this suggests that there is a considerable pool of infection at present in the general population. The problem of unnotified and therefore uncontrolled tuberculosis should cause concern. The number of such cases in 1952 in England and Wales was 2,239. However, the modern facility of Mass X-ray is helping to solve this problem. It is understood that there are about 60 mobile Mass X-ray Units operating throughout the Country and the one serving this area is stationed at Broomfield Hospital, Chelmsford. In 1948 a Medical Director of one Mass X-ray Unit reported that 4.1 in every 1,000 people examined were found to have active tuberculosis and approximately 50% of the industrial population of the area in question had voluntarily submitted for X-ray. The fate of the remaining 50% was queried and according to several welfare officers the people who will not come for X-ray are usually those who have symptoms and should therefore report. The results of a survey undertaken in South-East Essex in 1953, which included X-ray sessions at Hadleigh and Rayleigh (Canvey Island being excluded on account of the Flood Disaster), showed that 2.1 per 1,000 were affected with active tuberculosis. Whilst this figure would appear to show a marked improvement over the results of 1948 in a different and distinct industrial area, it should be pointed out that only about 10% of the eligible population attended for X-ray in the survey referred to.

The control of human tuberculosis is obviously complex because of the difficulty of exercising control over the individual. New methods of treatment do play a large part in reducing mortality and limiting invalidity associated with the disease, but the anti-tuberculosis vaccine B.C.G. (*Bacillus-Calmette-Guerin*), which has only found acceptance in this Country in recent years, is the one specific weapon which can help to reduce the number of infected persons and the severity of new infections. This method has been found to be particularly useful where bad housing conditions have encouraged the spread of the disease. Usually young children and adolescents are the class which benefit most from this treatment, because they have been unable to build up natural resistance to the disease. I am advised by the local Consultant Chest Physician for the area that 23 persons of suitable age from these Districts were vaccinated with B.C.G. during 1953.

Many may be surprised to learn that B.C.G. vaccination has been available for 30 years. In 1949 it was stated that there is abundant evidence that B.C.G. increased resistance to tuberculosis and that collected data had shown that B.C.G. may cause a five-fold reduction in the morbidity and mortality of tuberculosis. This would be well worth achieving if only for the economy it would mean in surgical and sanatorium treatment.

It has recently been stated that owing to the absence of official figures the cost of the various services to tuberculosis patients is not readily calculable, but the hospital, clinic and local health services must entail an expenditure of over £11,000,000 annually.

In 1948 a Swedish professor stated that the beneficial effect of B.C.G. vaccination is increasingly apparent at ages ranging above childhood. He stated that the infection rate at 15 years of age at that time was only 30-50% of what it was 40 years ago. In most countries the majority of the population become infected shortly after childhood in puberty and adolescence, at a time when natural non-specific resistance against tuberculosis decreases. B.C.G. vaccination, however, should have the same protective value at this age as in the susceptible ages of childhood and the vaccine should prevent manifest primary and early post primary pulmonary tuberculosis at this age.

### **Infant Mortality—Then and Now**

In considering the great saving of infant lives over the last 30 years let us turn again to statistics for 1924. In that year the population of England and Wales was 38,746,000 with 729,933 live births. There were 54,813 infants under one year of age who died and the total death roll of children under the age of five years was 83,732 or 22.64 per 1,000 living in that age group. During the same year 17.7% of all deaths occurred in children under five years. Maternal deaths claimed 2,847 mothers ; over 1,000 being attributed to puerperal fever. These are distressing figures in the light of present day standards, and we should be truly thankful that such a state of affairs no longer exists.

The following provisional figures for England and Wales have been taken from Returns of the Registrar General covering the year



1953. In that year the population for the Country was 44,090,000 ; there were 681,997 live births, 18,180 deaths of infants under one year of age and 527 maternal deaths. Whilst tremendous improvements have been achieved and the infant mortality rate has fallen from 75 per 1,000 live births in 1924 to 27 per 1,000 in 1953, the fact that over 18,000 babies died in 1953 is a challenge to the Public Health Service to press on unceasingly in the fight against disease and preventable mortality. As will be appreciated, the difference in the mortality rates for certain specified diseases listed on page 2 is reflected in no small measure in the great improvement in the infant mortality rate between the years 1924 and 1953, especially as regards measles, whooping cough, diphtheria, gastro-enteritis, etc. The infant mortality rate is considered to be the most sensitive index on the health and well-being of a community, and the Chief Medical Officer to the Ministry of Health in 1924 stated in his Annual Report for that year that a high infant mortality rate implies (a) the loss of many infants ; (b) the maiming of many surviving children, for conditions which kill some, injure others ; (c) a high death rate in the next four years of child life ; and (d) the existence of unhealthy conditions in the mothers or in the home life of the people. In the same report it is stated that improved health in infancy is to be found in better mothering, proper food and improved domestic conditions immediately concerned with child welfare. Such remarks are still full of timely wisdom for us today.

In the two comparative years, the population of England and Wales *increased* by 13.3%, live births *decreased* by 6.5%, and despite the increased population, the infant mortality fell by nearly 67%. Thus as population has increased, births and mortality among the young have decreased. Quoting again from the 1924 report, it is stated that the causes of death among very young children fall into three main groups :—

(a) Developmental and wasting conditions, including prematurity and congenital defects ;

(b) Respiratory diseases, such as bronchitis and pneumonia ;

(c) Diarrhoea and enteritis.

Without the inclusion of flood victims from Canvey Island, of which details will be given later, the position in 1953 reveals that only 2.6% of all the 612 deaths in Benfleet, Canvey Island and Rayleigh were among children under five years of age ; there being only one child death between the ages of one and five. This is vastly different to the national figure of 17.7% in 1924. The 15 infants who died in these districts in 1953 showed a favourable improvement on the figure of 23 who died in 1948.

## Accidents

Another cause of serious mortality which needs continual emphasis is the question of accidents of one form or another. Twice as many people die annually as a result of accidents or other forms of violence than from tuberculosis. Whilst Road Safety Committees and other Agencies are doing splendid work, road deaths continue to account

for over 4,000 people every year and fatal home accidents are responsible for an even greater number amounting to between five and six thousand annually. Four fifths of these home accident deaths occur in young children under five years of age and in elderly people over 65. Road accidents in Essex during 1953 were responsible for 5,295 casualties including 87 killed and 1,875 seriously injured. Of these figures three of the deaths and 83 of those seriously injured occurred on road, in our areas.

The menace of mortality and permanent serious injury by accident must be combated with energy and determination in a manner which is only parallel with the attacks which have been made on disease and sickness over the last 100 years.

There is no doubt that the majority of road accidents are caused by either carelessness, errors of judgment, inefficient driving or speed, rather than bad road planning, obsolete vehicles or unavoidable issues. With congestion on the roads continually worsening, it seems imperative that some remedial action should be taken to ensure greater safety for all road users. Whether pedestrians or motorists, we all have an obligation to prevent accidents. There is a cause to every accident, whether on the roads, in the home or in industry, and we all should seek to remain free from the guilt of our own conscience in all circumstances which might lead to accident, particularly in regard to road courtesy and behaviour.

### **Old People**

My remarks would be incomplete without brief reference to the continuing problem of the welfare of the aged. Whilst the problem grows apace with a continual rise in the number of old people, there was a definite move forward during 1953 in regard to the much needed services. In October, the Benfleet Urban District Council Old Peoples' Welfare Committee was formed and has since undertaken most useful work in connection with the general welfare of old people. This voluntary committee with a Local Authority representation, is affiliated to the Essex County Old Peoples' Welfare Committee which is prepared to advise and assist in the formation of new Committees in fresh areas.

At the 31st December, 1953 there were 43 old people from these Districts accommodated in residential institutions and hostels provided by the Essex County Council under Part III of the National Assistance Act, 1948. In addition there were a further 22 other persons maintained by the Essex County Council in establishments administered by voluntary organisations. Although no progress has been made in regard to the provision of hostel accommodation within these Districts owing to the lack of suitable buildings for adaptation, the opening of a former hotel at Westcliff during the latter part of the year has placed residential accommodation within easy reach, and needless to say, in a most congenial locality.

Dr. J. H. Sheldon, M.D., F.R.C.P., Senior Physician to the Royal Hospital at Wolverhampton, recently stated in his presidential address to the Third Congress of the International Association of Gerontology

that family loyalty takes its roots in a warm background of family affection during early life, and to be effective, it has to be a natural product, for it is not to be elicited by intellectual argument in later years. We are, in fact, dependent at the moment for the care of the majority of our old people on the love and sense of duty which they themselves transmitted to their children, and for any weakening of these bonds forged in early life the community would pay a price later on. All of which only goes to emphasise the truth that family life lies at the core of national life.

### **Family Life**

This leads me to the subject of the Family, the importance of which is now receiving renewed emphasis by medical and social workers. National outlook is intimately associated with family life and one of the greatest dangers that the Country has faced in recent years has been the deterioration of family unity and the tendency for parents to place their family responsibility anywhere apart from themselves. Many contributory factors have been evident and among them we might cite the employment of married women in industry and the multiplicity of modern entertainments which draw young people away from the simplicity of home life. The Earl of Feversham, D.S.O., D.L., in his fine inaugural address as President of the 1954 Health Congress at Scarborough stated that emotional stress and worry rather than germs precipitate the greater number of sickness problems. The future health of the people depends upon the ability of our social structure to develop stable individuals, adding to physical well-being disciplined minds and the ability to decide between conflicting emotions. The foundation of this stability can be laid only in the family, and our efforts ought therefore to be directed to strengthening and upholding the family as the basic unit of the nation's health. Children are said to be a sacred trust and the primary responsibility for their health must continue to rest with their parents who should look on members of the health services as agents who are ready to help them carry out their duties, and not as authorities taking the responsibility off their shoulders.

### **Canvey Island Flood Disaster**

Having reviewed many aspects of the widening sphere of preventive medicine, both nationally and locally, I cannot close these remarks without reference to the tragic disaster which overtook Canvey Island and many other areas along the eastern seaboard of Britain when freak weather conditions produced an abnormally high spring tide in the early hours of the 1st February and flooded many low lying coastal areas causing untold damage and considerable loss of life. As will be appreciated, the involvements of the Department and neighbouring Local Authorities, especially Benfleet and Rayleigh, were considerable. A special article prepared by me gives a comprehensive view of the medical aspects of the disaster, and the consequent involvements of the Medical Officer of Health and his staff, and has received considerable publicity. It first appeared in the foremost Public Health weekly, "The Medical Officer" and was later published in "Public Health"—



a monthly journal of the Health Officials' Association of Southern Africa, and "Foundation"—a Health Journal which represents the National War Memorial Health Foundation of South Africa. It has also been the subject of interesting comment by Sir Allen Daley, late Medical Officer of Health to the London County Council, in the "Bulletin of Hygiene" and the Ministry of Health have furnished copies to interested authorities in the U.S.A. Accordingly, I feel that I cannot do better than to quote the article here in full as a permanent record. The photograph shown is one of a series taken by a commercial firm and is reproduced from an original block by kind permission of "The Medical Officer."

## **CANVEY ISLAND FLOOD DISASTER.**

**By N. S. R. LORRAINE, F.R.S.E., M.D., Ch.B., D.P.H.**

Medical Officer of Health, Benfleet, Canvey Island and  
Rayleigh Urban Districts

BEFORE commencing this article I should like to indicate that any opinion expressed does not necessarily represent the view of my employing authorities.

### **PREAMBLE AND BACKGROUND**

In the era preceding the Roman Conquest, Canvey Island was between 10 and 30 feet above sea level and it is known to have been inhabited for some centuries B.C. with a large settlement at Leigh Beck. However, the strata subsequently settled, and in the sixteenth century records show that the area became flooded at certain high tides. It is likely that the Saxons had a small fishing community on Canvey, for the island's name is of Saxon origin, meaning the "Island of Cana's people."

To combat the periodical floods, Sir Henry Appleton, together with other landowners from the nearest mainland town of Benfleet, decided early in the seventeenth century to reclaim the island. Dutch settlers were invited to carry out the work in 1621 and the names of two Dutch engineers are prominent in historical records in conjunction with this endeavour, viz. Joas Croppenburg and Cornelius Vermuyden. The sea wall, some 18 miles in length, was built and drainage effected by means of dykes. These dykes still exist throughout the island.

Within a few years the island acquired a distinctly Dutch style. A wooden Dutch church was erected and Flemish was the authorised language for worship. However, the settlers ultimately became unpopular with the residents on the mainland and clashes were common until the former left in the period shortly before the dawn of the nineteenth century. Even today, the Dutch background to the island is still evident—there is an area known as the Dutch Village, and many private streets have Dutch names. Two or three cottages built by the original Dutch are still to be seen on the island and, until the beginning of the 1914-18 War, Flemish was still spoken by the fishermen of Canvey Island.





FLOODED CANVEY ISLAND, FEBRUARY 1953—NEWLANDS AREA

It is only during comparative recent years that the island has become so popular as a holiday resort and dormitory town for city workers who prefer the healthy estuary air, even though it means a 50-minute train journey from the nearest mainland station at Benfleet and perhaps a 15-minute 'bus journey across the island. Population trends clearly indicate the speed of recent developments, for in 1851 it is recorded that there were barely 100 people living on the island. By 1911 it was 585, and in 1931 the figure had risen to 3,500. Today, the population is estimated to be around 12,500.

#### DISASTER OVERNIGHT

The vulnerability of Canvey Island to flooding from the sea has always been a matter for concern by those engaged in local government in the area and other official bodies, but it would not appear that sufficient thought has been given in the past to sea defence measures. Unfortunately it has needed a major disaster to bring about the drastic improvements that were required.

It was brought out at the inquest on the 68 victims of the Southend area, 58 of whom came from Canvey Island, that the level of the tide at 24 feet 7 inches was 7 feet 3 inches above that which was expected, and was the highest tide since 1897. Flood tides caused by strong north-east winds had occurred earlier in the evening of 31st January on the north-east coast of Britain, and it was submitted by the Clerk of the Essex River Board that it would have been helpful if warning had been passed on by more northerly authorities that an exceptional high tide had been reported in the Wash at 6 p.m. Evidence given at the inquest showed that for some years a Thames Flood Warning System had been in operation on Southend Pier. At 10 p.m. on 31st January the pier authorities informed the Southend Police that an exceptional high tide was pending. At 11 p.m. similar information was transmitted to the London County Council, the Port of London Authority and Scotland Yard. The Essex River Board staff were on watch at Canvey during that bleak and disastrous night, but it seemed that little could be done at such a late hour to prevent disaster, although, of course, it was the hope of all responsible officials concerned that the walls would hold. No doubt an earlier warning would have given residents a greater chance, and so many would not have gone to bed in complete ignorance of impending danger.

High tide was due at 1.55 a.m. on Sunday, 1st February, but the tide turned about 1.10 a.m., and it was then that the walls broke. The Canvey Island Council's surveyor was warned of a high tide at 12.50 a.m. on 1st February when he proceeded immediately to the Council Offices. At 1.25 a.m. on 1st February he received information that flood water had penetrated the Newlands area, whereupon he called the Fire Brigade and initiated rescue operations, including the commandeering of small craft and the sounding of the siren and maroons. The coroner remarked that it was miraculous, taking all things into consideration, that the figures of the fatalities were not exceeded, and that they would have been, but for the work of Mr. R. H. Stevens (Canvey Council's surveyor) and others who worked spontaneously.

There is no doubt that the flooding of the island by the sea up to a depth of  $8\frac{1}{2}$  feet in some parts, constituted a disaster of great magnitude, and the seriousness was all the more grave owing to the fact that thousands of people were rendered homeless in the middle of the night, and one of the most stormy nights that can be remembered. Practically the whole population were completely unprepared and were either awakened by the swish of icy cold waters around their beds or by the fury of the gale outside. Residents in the north-east corner of the island were hit the worst. Here, bungalows are sited in close proximity to the sea wall, and when the water broke in, these bungalows were swamped in a few moments.

The very rough weather with a strong north-easterly gale blowing was chiefly responsible for the exceptional high tide. At certain points the gale swept the water right over the top of the sea walls, with the result that small gaps quickly became gaping breaches in the sea defences. In all, the walls were breached in 49 places and damaged in 98 more. The bleakness and blackness of the night made rescue work more difficult and the situation was further aggravated by the breakdown of telephonic communications with the mainland at the onset of the disaster.

#### PUBLIC HEALTH INVOLVEMENTS

At such a time false reports seem to spread quicker than facts and in the early stages of the disaster it was reported that the B.B.C. broadcast in its News Bulletin that the water supply on the island was polluted. Also, it was rumoured locally that a definite case of typhoid fever had occurred among the police personnel within a few days of the onset of the flooding. However, owing to the incubation period for this disease being for a much longer period, such rumours were ridiculous. By interviews with Press representatives these false reports were quickly and officially denied, and I would like to pay tribute to the very commendable way in which the Press co-operated.

(a) *Water Supply*.—Special measures had to be adopted in view of the fact that sewage had gained access to the flood water and there was a consequent imminent risk of contamination of the main water supply through the three deep wells of the Southend Waterworks Company which normally supply the greater part of the main water supply of the island. As these wells were electrically operated, the failure of electric power added to the difficulties and necessitated a complete switch over to the Company's mainland supply. As precautionary measures, chlorination was intensified and pressure increased from the mainland supply. Samples of the main water supply on the island were taken for bacteriological examination and reports subsequently received from the Southend Public Health Laboratory were satisfactory, showing that the water was pure and wholesome. Furthermore, as many properties on the island rely on rainwater for domestic use, it was evident that rainwater tanks in the worst hit areas had most probably become contaminated by flood water. Accordingly, householders were advised to either chlorinate or boil all rainwater before use. Throughout the whole period that contamination of the water



supply remained a strong possibility, constant liaison was maintained between my department and the Southend Waterworks Company.

(b) *Sanitation*.—The whole of the main sewerage system of the island was put out of action on account of the flooding of pumping stations and the failure of electric power. The system remained out of use for 17 days. When the flood water had subsided and the drainage system began to work again, it was surprising to find so few premises with drains that were either blocked or needing repair. All drains requiring attention were dealt with by the Public Health Department without delay.

With large detachments of the Army and Royal Air Force in the area it was necessary to arrange for the provision of latrines and for the same to be kept under constant supervision. This was undertaken in close co-operation with the Service Departments concerned. Disposal presented a problem. The flooded condition of the land made the usual method of disposal by burying impossible. Arrangements were therefore made for an outside contractor to collect the contents of pail closets and to transport them out of the area. Similar arrangements were made for members of the Fire Brigade, Police, and civilian volunteer personnel engaged in the operations.

(c) *Condemned Food*.—The sorting of vast quantities of food damaged by flood water was a task which could not be undertaken on the island as all suitable buildings were flooded. Accordingly, assistance had to be sought on the mainland, and this was readily forthcoming. Accommodation was generously provided by a private firm in a new factory building and sanitary inspectors from neighbouring local authorities undertook the work of placing the salvaged food in the following categories : (i) Unfit for any purpose ; (ii) Fit for animal feeding only ; and (iii) Fit for reconditioning. In all, approximately 25 tons of a great variety of foods, including rationed commodities, were involved, and disposal was arranged in conjunction with the Ministry of Food.

(d) *Emergency Feeding Arrangements*.—A number of Feeding Centres were established on the island for the benefit of rescue and repair workers. Also, large numbers of evacuees and voluntary helpers were fed at school canteens on the mainland, both in Benfleet and Rayleigh, and strict vigilance was necessary to safeguard against food poisoning and alimentary upsets. At such times illness could have been easily introduced by lack of personal hygiene among a mixed number of voluntary helpers, especially on the island with its difficult sanitary arrangements at the material time. However, according to all available information, the whole operation of rescue and rehabilitation proceeded unhindered by any complication on the health side associated with food.

(e) *Mortality and Burial Arrangements*.—Various figures have been published of the number of deaths at Canvey Island as a result of the flood. However, the factual total according to authentic death returns is 58, although it is assumed that a number of people died indirectly. For example, in the February and March period of 1952



there were 35 recorded deaths, whereas in the same period in 1953 there were 52, that is, additional to the 58 already mentioned. It would seem evident that the hardship endured on that tragic night of 31st January/1st February reacted badly on the aged and those prone to respiratory conditions.

Mortuary arrangements were kindly made by the Southend and Rochford General Hospitals and the Benfleet Urban District Council made their cemetery at South Benfleet available for the burial of a number of the victims.

### EVACUATION

An important factor which should be borne in mind when drawing a mental picture of the involvements of the Medical Officer of Health in such a disaster as the one under consideration, is the fact that I was the Medical Officer of Health not only for stricken Canvey, but also for the principal reception areas on the adjoining mainland, e.g. Benfleet and Rayleigh Urban Districts. Whilst this fact gave the administrative advantage of unified control, it also inflicted a very heavy burden and responsibility on the unfortunate part-time Medical Officer of Health and his staff.

(a) *Reception and Rest Centres.*—About 10,000 of the 12,000 or more inhabitants of the island evacuated to the mainland and their temporary resettlement was no mean task. At least 10 schools and other suitable buildings within a six mile radius of the island's centre, mostly within the Benfleet and Rayleigh areas under my jurisdiction, were opened on that Sunday morning as evacuees began to stream across to the mainland, some wading through feet of water, others by lorry, 'bus, private car and any other form of transport that became available. The South Benfleet Primary School was established as the main Reception Centre and started to function as such at 5.30 a.m. on the 1st February. After receiving hot drinks, necessary clothing and first aid treatment, evacuees were directed to one or other of the Rest Centres which opened up just as quickly as the demand arose. Many of the evacuees were re-billeted in private homes as the public responded to the need, and in this way most of the Rest Centres were able to close down after a few days. Ultimately, the Benfleet Secondary School, which was due to be officially opened for educational purposes on 2nd February, became the main Rest Centre where, at one time, over 1,000 evacuees were billeted. The day to day report for the 10th February indicated that over 600 were accommodated in two Rest Centres and nearly 4,000 in private billets. As the bulk of Canvey's normal population originate from the London area, a very great number of evacuees made their way to relatives in various parts of the metropolis. After evacuation had been completed, the two Benfleet centres did magnificent work in tracking down missing relatives. Literally thousands of inquiries were received and remarkable efficiency was displayed in directing anxious relatives to the whereabouts of evacuated residents from the stricken island.

The response from the public was tremendous. Local residents

in the receiving areas, including South Benfleet, Thundersley, Hadleigh, Rayleigh, Pitsea and the County Borough of Southend-on-Sea, came forward with all kinds of assistance—accommodation, clothing, comforts, transport, and voluntary help. Many practical gifts were received from trading concerns—free bread daily from a large London bakery to a canteen providing many hundreds of meals, hot water bottles from a manufacturing chemist, milk chocolate from a well known firm, new women's clothing, many gallons of disinfectant, and possibly many other gifts unrecorded.

(b) *Medical Care of Evacuees, Rescue and Repair Workers.*—General practitioners throughout the reception area readily assisted with the medical needs of billeted through their routine surgeries. The four Canvey Island doctors established First Aid Posts on the island and in general met the needs of the rescue and repair workers. They were aided in this by two R.A.F. Medical Officers. A South Benfleet practitioner opened a surgery at the South Benfleet Reception Centre and did really Trojan service. Two of the Canvey Island doctors subsequently opened a sick bay at the Main Rest Centre at Benfleet Secondary School and so provided medical attention to the hundreds of evacuees billeted there. With the co-operation of the Essex County Council two sick bays, accommodating 10 patients each, were established at the South Benfleet and Thundersley Health Centres. In this way, many hospital beds were kept free for more urgent and suitable cases. With regard to the part played by the hospitals in the area, I understand that a total of 129 casualties were admitted to the Southend and Rochford General Hospitals for in-patient treatment. In addition, a further 90 were dealt with at the out-patient department of the Southend General Hospital. The medical and nursing staff of the Essex County Council gave valuable service as also did the St. John Ambulance Brigade with its army of trained and untrained voluntary personnel. Much help was also forthcoming from the Red Cross and the Women's Voluntary Service.

Reference must here be made to the very efficient way in which the County Ambulance Service assisted in the removal to safety of the aged and the sick and injured to hospital. Also, the provision of an ambulance vehicle fitted with wireless was the only means of communication with the mainland in the early stages of the disaster.

During the period that elapsed after the flooding, when conditions were ripe for epidemics, there was not a single case of any dangerous infectious disease reported, and the incidence of illness, taking into account the exposure and hardships endured, was surprisingly small.

#### REHABILITATION

Naturally, the thousands of residents who left the island so hurriedly were anxious to return at the first opportunity. This presented difficulties and possible public health dangers, but in view of the concern which evacuees had for the safety of their homes and relatives, it was neither possible nor reasonable to prevent the people from returning to the island. Accordingly, steps were taken to ensure that due warning was given of the imminent public health dangers,

and about 5,000 copies of a special leaflet were distributed as from the 16th February onwards. (See Appendix.)

(a) *Assistance from Service Departments.*—The help given by the Army and the Royal Air Force was magnificent, without which, the precarious state of the sea walls would have given rise to the possibility of further flooding with subsequent high spring tides. Also, the Naval and Air Force authorities loaned a number of special aircraft heaters, gathered from all parts of the country. These were a tremendous help in drying out the properties which were more severely affected by flood water, thereby enabling re-occupation in a very much shorter space of time.

(b) *Assistance from Other Local Authorities.*—By arrangement with the County Medical Officer of Health (Dr. H. Kenneth Cowan), 12 sanitary inspectors were temporarily loaned for emergency work on the island. The local authorities kindly participating in this welcome help were the Boroughs of Dagenham and Ilford, the Urban Districts of Benfleet, Billericay, Brentwood, Hornchurch, Rayleigh and Witham, and the Rural Districts of Chelmsford, Maldon and Ongar. The district was divided into six areas and the inspectors made routine visits to all affected properties, surveying the extent of the flood damage and proffering advice to returning evacuees on public health and practical measures concerning the cleaning up of their properties. These inspectors stayed on the island for some weeks, giving valuable assistance, thereby bringing order out of chaos in a remarkably short space of time. This, in itself, was a great aid to the public health of the area.

Also, in various matters, assistance was very generously given by the Benfleet, Billericay and Rayleigh Urban District Councils and also the Southend Corporation.

(c) *Disposal of refuse and debris.*—The normal collection of domestic and trade refuse recommenced at an early date, but the water-logged condition of unmade roads made things very difficult. In addition, it was necessary to make arrangements for the collection of immense quantities of goods and effects made useless by the flooding. This included bulky articles of furniture and bedding.

As soon as conditions permitted, arrangements were made for the collection of dead animals. This was a difficult task as supervision in locating the carcasses was necessary, bearing in mind the many dykes on the island. Among the collection were poultry, rabbits, dogs, cats, goats, pigs, sheep and cattle.

Many rodents died as the result of the floods, but following recession of the flood water a few infestations were found. Assistance in this matter was kindly given by the Infestation Control Division of the Ministry of Agriculture and Fisheries.

(d) *General assistance to householders.*—Many hundreds of tins of a special preparation were freely issued on demand to householders for use in connection with mould growths on walls as a result of the flooding.



Also, large quantities of disinfectant were issued free to the general public to assist them in cleaning up their homes. It needs little imagination to appreciate the condition of the inside of a bungalow home after being flooded with up to 8 feet of black dirty sea water, churned up by the gale. After the flood water receded, everything within such properties was coated with a layer of black mud, and where rehabilitation was delayed, a potential public health nuisance arose in many instances.

With the help of the Ministry of Agriculture and Fisheries, householders were advised as to the necessary treatment of gardens which had been flooded with salt water. To facilitate matters, the Canvey Island Council, on behalf of the Ministry, provided free issues of "Gypsum" on demand.

### CONCLUSION

Whilst the courage and steadfastness of Canvey people was absolutely wonderful during the hour of calamity, the outstanding feature of the disaster was the tremendous response which came from hundreds of individuals, homes and organisations on the mainland, not only in South East Essex, but further afield in the United Kingdom, and even across the seas. It will not be easy to forget that memorable Sunday morning, when there was one continuous stream of unorganised traffic—private cars, vans, lorries, 'buses, and every conceivable form of transport, all loaded with bedraggled humanity and with such possessions as could be carried, wending their way to reception and rest centres, private billets and friends and relatives on the mainland.

One of the greater lessons of the flood disaster at Canvey Island, other than the effective re-establishment of the sea walls, is the provision of adequate entrance and exit to the island from the mainland, and it is hoped that the High Level Bridge Scheme will soon materialise to this end.

The manner in which the Royal Family, Government officials and others in high office expressed their sympathy was much appreciated by those who suffered the loss of home and loved ones. Her Majesty the Queen Mother and Princess Margaret visited the Benfleet Secondary School and talked with the evacuees there. The Lord Mayor of London, the Minister of Health and other Government Ministers, senior county officials and others in authority visited the island and saw for themselves the plight of the district. This personal interest by those who share in the leadership of the nation meant a tremendous lot to all engaged in the disaster, both rescuers and rescued.

This article would be incomplete without reference to the thanks which are due from so many to so many. The thousands of islanders are, I know, more than thankful to all who came to their aid at such a time—rescuers and the vast army of helpers who freely gave their services when help was needed most—in canteens, first aid posts, rest and reception centres, sick bays, etc. Many opened their homes, others used their cars and still others gave the much needed clothing, blankets and comforts. Real appreciation is warmly expressed for



the organised help of the St. John Ambulance Brigade, the British Red Cross Society and the Women's Voluntary Services. The Area Commissioner for the Eastern Division of the St. John Organisation, Dr. T. M. Wilks, M.B.E., T.D.—a local practitioner—was awarded the O.B.E. for his services in the flood. The teaching staffs and heads of the Essex Education Committee schools affected did magnificent work in running the Rest and Reception Centres in their school premises. In particular, I am personally indebted to Dr. H. Kenneth Cowan (County Medical Officer of Health), Dr. P. G. C. Jones, my deputy, and Mr. Donald J. Legg, Senior Sanitary Inspector to the Canvey Island Urban District Council. As will be appreciated, Mr. Legg's burden was particularly heavy.

Looking back, it would appear that the Public Health Service, involving doctors, nurses, sanitary inspectors and administrators, played a very important part, even though not particularly spectacular, in this major disaster.

#### *Appendix*

##### CANVEY ISLAND URBAN DISTRICT COUNCIL—PUBLIC HEALTH DEPARTMENT NOTES FOR EVACUEES RETURNING TO FLOODED AREAS

Sewage has gained access to the flood water and it is advisable for you to take the following precautions :—

#### 1. *Water Supply*

This is priority No. 1. If you are on the mains, ensure that *flooded* water cisterns and taps are properly sterilised before being brought into use. The Sanitary Inspector or Waterworks Officials will help you on this. If your supply is from a rain-water storage tank, this may be polluted, therefore you should boil such water before use. Alternatively, get your supply from the main if possible.

#### 2. *Food*

- (a) Always wash your hands before preparing or eating food.
- (b) All food utensils should be cleansed and immersed in boiling water before use. Cookers should be cleansed with hot soapy water.
- (c) All food, liable to contamination, left in the house on evacuation, should be destroyed. Food in containers unaffected by the flooding should only be used if there is a certainty that contamination has not arisen. The Sanitary Inspector will advise if in doubt. Tinned food, in unopened containers, affected by flood water, may be used providing the outside of the tin is washed with hot soapy water

#### 3. *Drainage*

The sewerage system has been unusable since the flooding, and until all surplus water can be drained or pumped away, drains should be used as little as possible. Once the flood water is removed you should ensure that your drainage system is thoroughly flushed out. Blocked drains should not be used.

#### 4. *Gas and Electricity Service*

Notify the respective Gas and Electricity Boards as soon as you return. These services should not be used until inspected by Gas or Electricity Board officials.

#### 5. *General*

Everything is being done to assist the Island population in returning to a normal life, and a team of Sanitary Inspectors is visiting all affected houses in the District. Residents are therefore requested to refrain from making unnecessary complaints or inquiries at the Council Offices.

THESE NOTES ARE INTENDED TO SAFEGUARD YOUR HEALTH.

14th February, 1953.

N. S. R. LORRAINE, M.D., D.P.H., F.R.S.E.,  
*Medical Officer of Health.*

The Essex River Board has recently prepared a short report on the restoration of the sea walls of the Island following the flooding in 1953, and is quoted as follows :—

## **FLOODING OF CANVEY 1953.**

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### **SEA WALL RESTORATION**

On the night of January 31st, 1953, an abnormal tidal surge on the North Sea resulted in the over-topping and breaching of the sea walls along the East Coast, causing considerable loss of life and damage to residential, industrial and agricultural property.

Of the 839 breaches along 310 miles of sea wall under the control of the Essex River Board, 51 occurred in the 15 miles of wall which encloses Canvey Island.

Following the flooding, emergency repair work was immediately put in hand. Service personnel, University Students and various civilian organisations came quickly to the Island to supplement the Civil Engineering Contractors who were already there, and who immediately placed their organizations at the disposal of the River Board.

Since the completion of the Emergency Work, the restoration and improvement of the standard of the Island's defences has gone ahead continuously.

Along the 5 mile length of wall fronting the Thames and along the badly breached length known as Sunken Marsh, restoration and improvement has been carried out by the driving of interlocking steel sheet piles into the seaward slope of the wall. Concrete block facing has been laid on the upper part of the seaward slope. In addition to the piling, roughly a mile of the original clay wall has been thickened with many thousands of cubic yards of clay.

The total length of wall enclosing the Island has been reduced by  $2\frac{1}{2}$  miles by the construction of clay dams across Tewkes and Small Gains Creeks. The dams, which have been faced with concrete blocks and stone, contain approximately 50,000 cubic yards of clay.

The remainder of the Island's wall has been raised and thickened with clay, and on lengths which are subject to wind and wave action, the seaward slope has been protected by facing it with concrete blocks jointed in bitumen.

Some idea of the magnitude of the works which have been carried out during the past year can be seen from the following figures :—

Over half a million cubic yards of clay excavated from " borrow-pits " on the Island and deposited on the wall.

2,000 tons of interlocking steel sheet piles driven on a total frontage of  $5\frac{1}{2}$  miles.

5 miles of second-hand London tramrail used to reinforce the piling.

350,000 concrete blocks bedded into the seaward face of the wall.

It is interesting to note that if the concrete blocks were laid in a single line, edge to edge, they would extend for 83 miles.

During the peak of the work, there were some 50 mechanical excavators, 20 bulldozers and 70 lorries working on the Island and the labour strength was in the region of 450 men.

The work under the present contracts is now nearing completion and the River Board is at present considering a further programme of works to commence later this year. These works will take the form of clay backing to the sheet piled section where this has not already been done.

Credit must be given to the Contractors and to their men who have worked on the wall under the severest weather conditions to accomplish so much in a comparatively short time.

*May, 1954.*

\* \* \* \* \*

Some further facts about the flood disaster show that the sea defence improvement works have cost about £800,000. Some 12,000 claims have been met by the Lord Mayor of London's Flood & Tempest Distress Fund involving payments amounting to over £463,000. The cost in human lives has already been pointed out, but it may be of interest to record that of the 58 deaths on Canvey directly attributed to the flood, 8 were under 15 years of age, 3 were between 15 and 45 years, 14 between 45 and 65 and 33 were over 65 years. Thus, as may be expected, the section of the community which suffered most was the aged.

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### **Preventive Medicine in Prospect**

More recent problems facing the Medical Officer of Health and his staff are poliomyelitis (infantile paralysis), lung cancer, food poisoning and gastro-intestinal infections. Whilst these matters will receive attention later in the report, I would like to emphasise here the importance of these and other subjects such as virus infections, about which so little is known, and the increasing demands which are likely to be made upon the Public Health Department. Preventive medicine stands at the threshold of a new era of activity and progress for the benefit and well-being of twentieth century mankind.

### **Conclusion**

Finally, I would like to pay warm tribute to my locum, Dr. P. G. C. Jones of Hockley, for his assistance during the year, to general practitioners of the three areas for their ready co-operation and to my inspectorial and clerical staff for their loyal support during the year under review. Similarly, I desire to express my sincere thanks to the

Members of each District Council for their helpful and sympathetic consideration of many problems during the year.

“ The health of the people is really the foundation upon which all their happiness and all their power as a State depends.

Disraeli.”

I beg to remain,

Your obedient Servant,

NORMAN LORRAINE,

F.R.S.E., M.D., Ch.B., D.P.H., R.C.P.S. (Edin).

& R.F.P.S. (Glas.), M.R.San.I.

August, 1954.



## PUBLIC HEALTH COMMITTEES

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### *Benfleet Urban District—*

Councillor L. A. G. Cunnington (Chairman).  
Councillor H. R. Bridge  
Councillor R. B. Brittain, J.P. (Chairman of Council).  
Councillor S. Corbett  
Councillor J. E. Daniels  
Councillor Mrs. L. F. A. Everett  
Councillor E. E. J. Jeanes  
Councillor R. E. Lewis  
Councillor F. J. Palmer  
Councillor T. C. Rigden  
Councillor I. J. Smith

### *Canvey Island Urban District—*

Councillor S. C. Marsom (Chairman).  
Councillor Mrs. D. G. Elkington  
Councillor Lt.-Col. H. P. Fielder, T.D.  
Councillor Mrs. E. M. Fisk, J.P.  
Councillor H. T. George  
Councillor E. G. Nightingale, J.P. (Chairman of Council).  
Councillor H. C. Whitcomb  
Councillor A. P. Zambra

### *Rayleigh Urban District—*

Councillor E. Trippier (Chairman).  
Councillor F. Alexander  
Councillor Mrs. M. B. Blower  
Councillor E. G. Collins (Vice-Chairman of Council).  
Councillor Mrs. F. M. Cottee, J.P.  
Councillor W. V. Curtis, J.P. (Chairman of Council).  
Councillor M. Freund  
Councillor Mrs. M. B. D. Green  
Councillor E. E. Osborne  
Councillor D. S. Paterson

## COMPOSITE PUBLIC HEALTH COMMITTEE

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### *Representatives for Benfleet Urban District—*

Councillors H. R. Bridge, L. A. C. Cunnington, J. E. Daniels.

### *Representatives for Canvey Island Urban District—*

Councillors Mrs. D. G. Elkington, Mrs. E. M. Fisk, J.P.

### *Representatives for Rayleigh Urban District—*

Councillors Mrs. M. B. Blower, Mrs. M. B. D. Green, E. Trippier.

## PUBLIC HEALTH STAFF

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<i>Medical Officer of Health</i>	Norman Lorraine, F.R.S.E., M.D., M.B., Ch.B., D.P.H., M.R.San.I.
<i>Locum to Medical Officer of Health</i>	P. G. C. Jones, M.R.C.S., L.R.C.P., D.P.H.
<i>Secretary to Medical Officer of Health</i>	R. F. Stripp
<i>Sanitary Inspectors</i>	.. J. E. Gilbert, M.R.San.I., M.S.I.A., Senior Sanitary Inspector, Benfleet U.D.C.  P. Sanders, M.S.I.A., Additional Sanitary Inspector, Benfleet U.D.C.  Donald J. Legg, M.R.San.I., M.S.I.A., Senior Sanitary Inspector, Canvey Is- land U.D.C.  A. P. J. Cook, A.R.San.I., M.S.I.A., Deputy Sanitary Inspector, Canvey Island U.D.C.  E. H. Lloyd, M.R.San.I., M.S.I.A., Sani- tary Inspector, Rayleigh U.D.C.
<i>Clerical Assistants</i>	.. A. J. Hart, A.C.C.S., Benfleet U.D.C.  Miss P. G. Solomon, Canvey Island U.D.C.  Miss G. Ward, Rayleigh U.D.C. (Part- time).

# SECTION "A"

## STATISTICS AND SOCIAL CONDITIONS OF THE AREA

	Bentfleet	Canvey Is.	Rayleigh
Area (in acres) .. .. .	6,360	6,350	5,732
Inhabited Houses at 31st December, 1953 (according to Rate Book)	7,101	4,613	3,328
Population (1951 Census) .. ..	19,881	11,255	9,388
Population (Registrar-General's estimate for mid 1953) .. ..	19,770	11,750	9,539
Rateable Value .. .. .	£127,233	£55,309	£65,940
Sum represented by a Penny Rate ..	£514	£206	£271
Rateable Value per head of the estimated population .. .. .	£6.43	£4.7	£6.9

The social conditions of the area remain substantially the same as recorded in my Report for the years 1951 and 1952.

## EXTRACTS FROM VITAL STATISTICS FOR THE YEAR

			Bentfleet			Canvey Island			Rayleigh		
			M	F	Total	M	F	Total	M	F	Total
<i>Live Births :</i> .. ..			125	132	257	91	81	172	60	56	116
Legitimate .. ..			117	127	244	86	75	161	57	53	110
Illegitimate .. ..			8	5	13	5	6	11	3	3	6
<i>Stillbirths :</i> .. ..			2	2	4	4	1	5	3	—	3
Legitimate .. ..			2	2	4	4	1	5	3	—	3
Illegitimate .. ..			—	—	—	—	—	—	—	—	—
<i>Deaths :</i> .. ..			148	139	287	132	109	241*	66	76	142
<i>Birth Rate</i> per 1,000 of the estimated resident population ..											
			13.0			14.6			12.2		
<i>Stillbirth Rate</i> per 1,000 total (live and still) births .. ..											
			15.3			28.2			25.2		
<i>Death Rate</i> per 1,000 of the estimated resident population ..											
			14.5			*20.5			14.9		
<i>Death Rate of Infants under one year of age :</i>											
Total number of infant deaths ..			9			4			2		
All infants per 1,000 live births ..			35.0			23.3			17.2		

\* High on account of fatalities caused by Flood Disaster.



Legitimate infants per 1,000 legiti- mate live births ..	28.7	24.8	18.2
Illegitimate infants per 1,000 illegiti- mate live births ..	153.8	—	—
Deaths of infants un- der four weeks of age .. ..	3	2	2

COMPARATIVE TABLE OF BIRTH, DEATH AND INFANT  
MORTALITY RATES DURING THE YEAR 1953

	Rate per 1,000 resident population		Deaths under one year per 1,000 registered live births	
	Live births	Deaths from all causes		
England and Wales ..	15.5	11.4	..	27
160 County Boroughs and Great Towns including London .. .. .	17.0	12.2	..	31
160 Smaller Towns. Resi- dent population 25,000— 50,000 at 1951 Census ..	15.7	11.3	..	24
London Administrative County .. .. .	17.5	12.5	..	25
BENFLEET U.D. ..	13.0	14.5	..	35
CANVEY ISLAND U.D.	14.6	*20.5	..	23
RAYLEIGH U.D. ..	12.2	14.9	..	17

\* High on account of fatalities caused by Flood Disaster.

# COMPARATIVE TABLE OF BIRTH, DEATH AND INFANT MORTALITY RATES FOR THE YEARS 1949-1953

Year			Birth Rate		Death Rate		Infant Mortality Rate
<i>Benfleet U.D.</i>							
1949	..	..	15.4	..	14.3	..	36.5
1950	..	..	12.9	..	14.1	..	35.4
1951	..	..	12.1	..	15.3	..	29.3
1952	..	..	13.7	..	15.3	..	29.7
1953	..	..	13.0	..	14.5	..	35.0
<i>Canvey Island U.D.</i>							
1949	..	..	17.8	..	12.2	..	10.6
1950	..	..	16.5	..	14.1	..	39.3
1951	..	..	18.6	..	14.2	..	14.6
1952	..	..	14.6	..	12.6	..	47.0
1953	..	..	14.6	..	* 20.5	..	23.3
<i>Rayleigh U.D.</i>							
1949	..	..	15.9	..	16.2	..	47.0
1950	..	..	13.1	..	11.9	..	16.1
1951	..	..	13.8	..	14.1	..	—
1952	..	..	14.3	..	14.2	..	22.2
1953	..	..	12.2	..	14.9	..	17.2
<i>Averages for last five years :</i>							
England & Wales			15.8	..	11.7	..	29.2
Benfleet U.D.			13.4	..	14.7	..	33.2
Canvey Island U.D.			16.4	..	14.7	..	27.0
Rayleigh U.D.			13.9	..	14.3	..	20.5

## POPULATION STATISTICS

Year			Benfleet U.D.		Canvey Island U.D.		Rayleigh U.D.
1930	..	..	11,900	..	3,530	..	6,256
1935	..	..	14,160	..	5,584	..	7,232
1940	..	..	15,140	..	5,240	..	7,810
1945	..	..	17,350	..	7,960	..	7,539
1950	..	..	19,720	..	10,800	..	9,474
1951 (Census)	..	..	19,881	..	11,255	..	9,388
1952	..	..	19,640	..	11,640	..	9,415
1953	..	..	19,770	..	11,750	..	9,539

*Note :* The 1951 Census revealed that Canvey Island showed the highest increase in population for the County of Essex since the previous Census in 1931. That increase was 218.0 per cent.

\* High on account of fatalities caused by Flood Disaster.

# DEATHS AT VARIOUS AGES DURING 1953

Age	Number in District	Deaths		Inward Transfers	Number of deaths which apply to District
		Outward Transfers			
<i>Benfleet U.D.</i>					
Under 1 year ..	1	..	—	..	9
1 and under 2	—	..	—	..	1
2 „ „ 5	—	..	—	..	—
5 „ „ 15	—	..	—	..	1
15 „ „ 25	1	..	—	..	1
25 „ „ 35	—	..	—	..	1
35 „ „ 45	3	..	—	..	8
45 „ „ 55	9	..	2	..	15
55 „ „ 65	18	..	1	..	27
65 „ „ 75	57	..	1	..	87
75 and upwards	89	..	5	..	137
Totals for Benfleet	178	..	9	..	287
<i>Canvey Island U.D.</i>					
Under 1 year ..	2	..	—	..	4
1 and under 2	—	..	—	..	—
2 „ „ 5	3	..	—	..	3
5 „ „ 15	4	..	—	..	5
15 „ „ 25	—	..	—	..	1
25 „ „ 35	3	..	—	..	4
35 „ „ 45	3	..	—	..	3
45 „ „ 55	6	..	1	..	13
55 „ „ 65	24	..	—	..	38
65 „ „ 75	45	..	—	..	79
75 and upwards	38	..	—	..	91
Totals for Canvey Is.	128	..	1	..	241
<i>Rayleigh U.D.</i>					
Under 1 year	—	..	—	..	2
1 and under 2	—	..	—	..	—
2 „ „ 5	—	..	—	..	—
5 „ „ 15	—	..	—	..	—
15 „ „ 25	—	..	—	..	—
25 „ „ 35	—	..	—	..	—
35 „ „ 45	4	..	—	..	4
45 „ „ 55	3	..	—	..	8
55 „ „ 65	8	..	1	..	17
65 „ „ 75	19	..	1	..	33
75 and upwards	64	..	4	..	78
Totals for Rayleigh	98	..	6	..	142



# CAUSES OF DEATH DURING 1953.

		Benfleet U.D.			Canvey Island			Rayleigh U.D.		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1.	All causes .. ..	148	139	287	..	..	..	66	76	142
2.	Tuberculosis, respiratory .. ..	1	4	5	..	..	..	3	—	3
3.	Tuberculosis, other .. ..	—	—	—	..	..	..	—	—	—
4.	Syphilitic disease .. ..	—	—	—	..	..	..	1	—	1
5.	Diphtheria .. ..	—	—	—	..	..	..	—	—	—
6.	Whooping Cough .. ..	—	—	—	..	..	..	—	—	—
7.	Meningococcal Infections .. ..	—	—	—	..	..	..	—	—	—
8.	Acute Poliomyelitis .. ..	—	—	—	..	..	..	—	—	—
9.	Measles .. ..	1	—	1	..	..	..	—	—	—
10.	Other infective and parasitic diseases .. ..	—	—	—	..	..	..	—	—	—
11.	Malignant Neoplasm, stomach .. ..	2	4	6	..	..	..	3	1	4
12.	Malignant Neoplasm, lung, bronchus .. ..	5	1	6	..	..	..	2	3	5
13.	Malignant Neoplasm, breast .. ..	—	4	4	..	..	..	—	4	4
14.	Malignant Neoplasm, uterus .. ..	—	1	1	..	..	..	—	—	—
15.	Other malignant & lymphatic neoplasms .. ..	15	10	25	..	..	..	10	6	16
16.	Leukaemia, aleukaemia .. ..	—	—	—	..	..	..	—	—	—
17.	Diabetes .. ..	—	1	1	..	..	..	1	2	3
18.	Vascular lesions of nervous system .. ..	28	27	55	..	..	..	6	18	24
19.	Coronary disease, angina .. ..	23	18	41	..	..	..	8	3	11
20.	Hypertension with heart disease .. ..	6	4	10	..	..	..	—	1	1
21.	Other heart disease .. ..	23	28	51	..	..	..	14	16	30
22.	Other circulatory disease .. ..	2	11	13	..	..	..	3	3	6
23.	Influenza .. ..	1	1	2	..	..	..	2	4	6
24.	Pneumonia .. ..	7	9	16	..	..	..	5	1	6
25.	Bronchitis .. ..	8	4	12	..	..	..	—	—	—
26.	Other diseases of respiratory system .. ..	3	1	4	..	..	..	2	1	3
27.	Ulcer of stomach and duodenum .. ..	2	—	2	..	..	..	—	—	—
28.	Gastritis, enteritis and diarrhoea .. ..	—	1	1	..	..	..	—	—	—
29.	Nephritis and nephrosis .. ..	2	—	2	..	..	..	—	—	—
30.	Hyperplasia of prostate .. ..	4	—	4	..	..	..	1	—	1
31.	Pregnancy, childbirth, abortion .. ..	—	—	—	..	..	..	—	—	—
32.	Congenital malformations .. ..	1	—	1	..	..	..	—	—	—
33.	Other defined and ill-defined diseases .. ..	9	7	16	..	..	..	3	9	12
34.	Motor vehicle accidents .. ..	2	1	3	..	..	..	—	—	—
35.	All other accidents .. ..	1	1	2	..	..	..	1	1	2
36.	Suicide .. ..	1	1	2	..	..	..	1	—	1
	Homicide and operations of war .. ..	1	—	1	..	..	..	—	—	—

## COMMENTS ON VITAL STATISTICS

### Birth Rate

In Rayleigh the Birth Rate was the lowest since 1941 when it was 12.0, and at Canvey Island, whilst unchanged from last year (14.6), was close to the previous lowest of 13.9 in 1940. Benfleet's rate of 13.0 was the same as the average rate for the ten years 1931-40, although the years 1950 and 1951 had produced lower rates.

### Death Rate

Variations in the Death Rate for 1953 were only minor in regard to Benfleet and Rayleigh although Canvey's rate (the highest on record) showed a sharp rise on account of the Flood Disaster. The total death roll associated with the Disaster was 75—58 directly and 17 indirectly, the latter being undoubtedly associated with exposure and age. Apart from this Disaster, the Death Rate for Canvey would have been about 14.1 with 166 deaths—the lowest rate for the three areas.

### Infant Mortality Rate

The 15 infant deaths in these areas during 1953 represented a combined Infant Mortality Rate of 25.2 as compared with 26.8 for the whole Country. Benfleet's rate was the highest (35.0) and Rayleigh's was the lowest (17.2). Canvey had a minimum rate of 23.3. In 1952 the combined rate was 33.0 with 19 infant deaths.

Of the 15 infants who died in 1953, six died from either prematurity or other conditions associated with the newborn, five from respiratory conditions, one from a congenital condition, one from Gastro-enteritis and two from asphyxia by accident. Of the five shown as dying from respiratory conditions, one was associated with measles and two had contributory congenital conditions.

### Comparability Factor

This calculation is intended to relate the Birth and Death Rates to the level of a normal average composition of population. This adjustment, to show the true picture, is necessitated by the existence of a high proportion of elderly retired folk in these Districts which is responsible for the Birth and Death Rates appearing unfavourable.

District		Compara- bility Factor		Actual Number		Actual Rate		Amended Number		Amended Rate
BIRTHS										
Benfleet U.D.	..	1.14	..	257	..	13.0	..	293	..	14.8
Canvey Island U.D.		1.14	..	172	..	14.6	..	196	..	16.7
Rayleigh U.D.	..	1.10	..	116	..	12.2	..	128	..	13.4
DEATHS										
Benfleet U.D.	..	0.73	..	287	..	14.5	..	210	..	10.6
Canvey Island U.D.		0.81	..	241	..	20.5	..	195	..	16.6
Rayleigh U.D.	..	0.75	..	142	..	14.9	..	107	..	11.2

These adjusted figures display a fairer comparison with the rest of the Country. The revised death rate for Benfleet and Rayleigh is very favourable and lower than the national rate. The Canvey Island rate although still high on account of the Flood Disaster, shows a vast improvement following the application of this factor. The adjusted figures show that if these Districts had had an even distribution of population, there would have been 158 fewer deaths during 1953. Similarly, there would have been a further 72 births credited to the three Districts.

SECTION “ B ”

GENERAL PROVISION OF HEALTH SERVICES FOR  
THE AREA

**Laboratory Service**

The three Districts continued to be well served by the Public Health Laboratory at Balmoral Road, Westcliff-on-Sea for the routine bacteriological examination of samples of food, milk, ice cream, water and sewage. The helpful co-operation of Dr. R. Pilsworth, M.D.(Lond.), the Director in Charge, is readily acknowledged. It is understood that during the year 124 samples involving ice cream, milk, water and shellfish were examined on behalf of the three Authorities.

Arrangements undertaken by the Essex County Council have also continued to operate for the examination of specimens by the Counties Public Health Laboratories of Victoria Street, London, S.W.1. and during the year five examinations were carried out on behalf of the Canvey Island U.D.C.

**Ambulance Service**

The Essex County Council's Ambulance Service continued to operate very successfully throughout the year and the following summary of work carried out by the two ambulance stations in the area will give an idea of the immense value that this essential Service has proved to the community as a whole.

	Thundersley Ambulance Station	Canvey Island Ambulance Station
Maternity .. .. .	236	61
Accident .. .. .	372	129
Other Emergency .. .. .	1,197	372
Non-Emergency .. .. .	5,821	2,240
Mileage covered .. .	95,984	32,912

At the Thundersley Station there are two stretcher case vehicles and two sitting case vehicles with a personnel strength of 16. This represents an increase of one sitting case vehicle and two personnel during the year. At Canvey Island the position remained unchanged, e.g. one stretcher case vehicle and five personnel.

Call arrangements continue as hitherto. Areas with an automatic telephone should dial 999 in case of emergency. This includes areas

covered by the Hadleigh and South Benfleet Exchanges. Where there is no dialling system the caller should ask the Operator for an ambulance for emergency purposes. This system prevails for the areas covered by the Rayleigh and Canvey Island Exchanges. Non-emergency calls should be made by a responsible person to the County Ambulance Officer (telephone Chelmsford 4801) when it is necessary to state (1) if a trained nurse is required, (2) if a sitting case car is required, and (3) in respect of a case of infectious disease an indication of the nature of disease as pronounced by the Medical Attendant.

Requests for the removal of cases of infectious diseases are usually made by the private doctor to the Medical Officer of Health or his staff when arrangements are made accordingly. With the exception of serious infectious conditions, such as smallpox, cases of infectious disease are carried in the ordinary ambulances of the County Ambulance Service and the vehicle used is thoroughly disinfected immediately afterwards.

The telephone number of the Thundersley Ambulance Station is South Benfleet 2323 and of the Canvey Island Station, Canvey 161.

### **Local Health Authority Services**

These are administered by the Area Medical Officer (Dr. W. J. Moffat) on behalf of the Essex County Council and the Area Health Office is located at 153, High Street, Rayleigh (telephone Rayleigh 831-2).

Those services coming within this category include Home Nursing, Midwifery, Health Visiting and Domestic Helps, and regular clinics are held at Hadleigh, Thundersley, South Benfleet, Canvey Island and Rayleigh Health Services Clinics for Ante-natal mothers and Child Welfare, the latter including sessions for immunisation against Diphtheria.

Under the School Health Service, clinics are also held for teeth, eyes, speech and minor ailments.

The following is a list of Midwives serving these Districts and the particular area which they cover—

### **BENFLEET URBAN DISTRICT :**

**Hadleigh**—Mrs. M. E. Watts, Glencairn, Homestead Gardens, Hadleigh. Telephone Hadleigh 58485.

**Thundersley** (including Daws Heath)—Miss J. Groombridge, 39, Queensmere (formerly Fowles) Ave., Thundersley. Telephone Hadleigh 58956.

**Great Tarpots** (including Thundersley west of White Hart Hotel)—Mrs. K. Hexter, Nurses Flats, Kents Hill Road North, Thundersley. Telephone South Benfleet 3304.

**South Benfleet** (covering area south of Tarpots Corner)—Miss J. G. Gledsdale, Nurses Flats, Kents Hill Road North, Thundersley. Telephone South Benfleet 3303.



CANVEY ISLAND URBAN DISTRICT (precise areas not specified)

Miss V. Dinnage and Miss D. Cartwright, 10, Thameside Crescent, Canvey Is. Telephone Canvey 388.

Miss M. Morgan, Flat 5b, Long Road, Canvey Island. Telephone Canvey 469.

RAYLEIGH URBAN DISTRICT :

**Rayleigh** (town area and east of High Street)—Miss M. Millard, 21, Daws Heath Road, Rayleigh. Telephone Rayleigh 147.

**Rayleigh** (lower area between High Street and Carpenters Arms)—Mrs. C. Foster, 128, London Road, Rayleigh. Telephone Rayleigh 1021.

**Rawreth** (including parts of Hullbridge and Battlesbridge)—Miss L. M. Baines, Stanway, Woodlands Road, Hockley. Telephone Hockley 432.

### Hospitals

Patients requiring hospital treatment are normally admitted to either the Southend or Rochford General Hospitals by direct arrangement between the General Practitioner and the hospital concerned. However, when no beds are available locally, the Emergency Bed Service takes on the responsibility of finding a bed as near as possible to the patient's home at the request of the private doctor. In certain circumstances the Medical Officer of Health is requested to support applications for urgent priority. Cases of infectious disease are normally sent to the Westcliff Hospital but the Isolation Hospitals at Thurrock, Rush Green and Chelmsford are available if necessary.

The Hospital Authority for the area—the North-East Metropolitan Regional Hospital Board—is also responsible for the following Clinics which serve Benfleet, Canvey Island and Rayleigh Urban Districts—

**TUBERCULOSIS**—Lancaster House Chest Clinic, Southchurch Road, Southend-on-Sea. Chest Physician—Dr. E. G. Sita-Lumsden, M.D., M.R.C.P. Telephone Southend 66851.

**VENEREAL DISEASE**—Southend V. D. Clinic, Westcliff Hospital, Balmoral Road, Westcliff-on-Sea. Telephone Southend 44415.

**OBSTETRIC AND GYNAECOLOGICAL**—At the Health Services Clinics, London Road, Hadleigh (telephone Hadleigh 57108), Furtherwick Road, Canvey Island (telephone Canvey 80) and Eastwood Road, Rayleigh (telephone Rayleigh 288).

**OPHTHALMIC**—At the Health Services Clinics, London Road, Hadleigh, Furtherwick Road, Canvey Island and Eastwood Road, Rayleigh.

**PHYSIOTHERAPY**—At the Health Services Clinics, Furtherwick Road, Canvey Island and Eastwood Road, Rayleigh.

## SECTION " C "

### SANITARY CIRCUMSTANCES OF THE AREA

#### Water Supply

The Water Undertaking for these Districts is the Southend Waterworks Company with Head Offices at 13, Cambridge Road, Southend-on-Sea. The supply for Canvey Island is mainly derived from boreholes at Leigh Beck and Hole Haven, which are operated by electrically submersible pumps. In the Benfleet and Rayleigh Districts approximately 80% of the supply is derived from river sources, and is pumped from the Company's main works at Langford, near Maldon. The balance of supply is obtained from deep wells, in which are installed electrically operated submersible pumps, sunk in various parts of the Company's area of supply.

To ensure purity, the Waterworks Company's Resident Chemist makes daily tests of the treated water going into the supply from river sources and fortnightly analyses of the water from the local deep wells. In addition, half-yearly samples are examined by the Counties Public Health Laboratories. The results obtained show waters of normal chemical character and good bacteriological quality. The water is pure and wholesome and suitable for public supply purposes. During 1953, the supply was satisfactory both as regards quality and quantity. No lead contamination of the water supplies was encountered during the year.

In the **Benfleet** Urban District 99% of all the dwelling-houses are supplied with main water. The supply is direct to the houses in all but seven properties, which are served by standpipes. The remaining 1% of dwelling-houses rely on supplies from rainwater tanks or shallow wells. Notices under the provisions of the Water Act, 1945 were served upon the owners of 14 properties requiring connections to the water main and all were complied with. The drier months of the year are generally difficult for families living in properties which are not supplied with main water, but on no occasion in 1953 was it necessary for drinking water to be delivered by the Local Authority.

At **Canvey Island** 92.8% of all dwelling-houses are provided with a main water supply. During 1953 281 properties were connected to the water main, thus making a total of 4,108 properties supplied by the Southend Waterworks Company. A further 173 properties are supplied with main water by means of stand-pipes. Also, 3,759 yards of new mains were laid during the year. Of this, 2,843 yards provided by Non-returnable contributions by the Urban District Council, 485 yards by Non-returnable contributions by private individuals, 264 yards for Council housing sites and 167 yards for private housing sites. In all, water mains were provided in 21 roads during the year. It is estimated that during the past six years  $8\frac{1}{2}$  miles of new water mains have been provided on Canvey Island and over 1,000 properties connected to the main supply.

The following further interesting details have been provided relating to the effect on the water supply during the period of the flooding.

With the failure of electric power in the early hours of the 1st February, the Waterworks Company's two pumping stations on the Island, known respectively as Hole Haven and Leigh Beck, were rendered inoperative, and pumping into the supply from these sources was not re-commenced until the Company's Chief Engineer had ensured that the water was suitable for public supply. The main water supply to the Island was maintained through the 12" trunk main from the mainland. Due to broken service pipes, taps left running and other plumbing work dislodged by the floods, the water demand rose sharply and the night flow was about as high as that during the day time. However, the distribution mains on Canvey were able to be kept under constant pressure as a safeguard against contamination. By the strenuous efforts of the Waterworks employees, the chief sources of waste were located and isolated or repaired within a few days, thereby enabling the supply to be maintained for the great influx of Service personnel engaged in the repair work. Daily bacteriological samples of water from the Island were examined at the Langford Laboratory and found to be uniformly free from pollution and suitable for public supply purposes. As a precautionary measure, local chlorination was increased and a supplementary chlorination station was installed on the 12" main close to Benfleet Creek and a satisfactory residual of chlorine maintained in the network of mains on the Island.

On the 18th February pumping to waste from one of the bore-holes at Hole Haven commenced and after pumping had been in progress for seven days the chemical quality of the water was nearly normal, and following a satisfactory bacteriological report the water was turned into supply on the 27th February. At the Leigh Beck Pumping Station pumping to waste started on the 4th March and continued for five days when the water was tested and found to be satisfactory for public supply. This pumping station was put into normal operation on the 10th March. It is satisfactory to record that the bore-holes on the Island appear to have suffered no permanent damage from the flooding.

In the **Rayleigh** Urban District 98.46% of all dwelling-houses were supplied with main water at the 31st December, 1953. Of this figure, 0.42% were supplied by stand-pipes. 181 new houses and three existing houses were connected to the main supply during the year.

### **Drainage and Sewerage.**

The **Benfleet** Urban District is divided roughly into eastern and western areas for the purpose of sewage disposal. The eastern area is further divided into north-eastern, draining by gravity to the Rayleigh Urban District; eastern, by gravity to the Rochford Rural District; and south-eastern, by gravity to the County Borough of Southend-on-Sea. The western portion of the District is also sub-divided into north-western, which is dealt with by the Pumping Station in Rushbottom Lane, Great Tarpots, and south-western, which is dealt with by the Pumping Station in South Benfleet. This latter also deals with sewage which is pumped from the north-western area. The pumps are driven by electric motors and are automatic in action.



The frequency of pumping depends upon the flow to the Pumping Stations. Sewage is pumped from the South Benfleet Pumping Station to the Disposal Works in the extreme south-west corner of the District, where it undergoes bacteriological treatment in the following order—

One balancing tank to equalise the quality of the sewage received.

Two continuous flow settlement tanks.

Two percolating filters.

One storm overflow tank to deal with over six times Dry Weather Flow.

The resulting sewage is dealt with on sludge drying beds. The effluent after treatment flows into the Benfleet Creek. Samples are taken from time to time by the Port of London Health Authority to ensure that the requisite standard of purity is maintained.

It is estimated that 93% of all the properties in the Benfleet District are connected to the main drainage system. 135 dwellings are served by cesspools and a further 370 houses and bungalows are provided with earth closets. These are largely confined to the New Thundersley area. During the year nine existing premises were connected to the main sewer and two to cesspools, whilst extensions or improvements were carried out to the drainage of four existing buildings. The number of connections to the main sewer was also increased by the 153 new properties which were erected during the year.

At **Canvey Island** sewage is by means of a gravity system with pumping stations at strategic points to raise sewage and produce the necessary head. On reaching the main pumping station at Southwick Farm, the sewage is pumped direct into the Thames by means of an 18 inch cast iron pumping main and 24 inch outfall on the river bed. The outfall pipe, which is supported by timber piles, is marked by a lighted buoy hired from Trinity House. This pumping main joins the outfall pipe at the sea wall where a valve prevents any back-flow of river water. In design, provision was made for the addition of a second 18 inch pumping main from Southwick Farm to link up with the outfall pipe at the sea wall. The pumps at the main station and intermediate stations are centrifugal pumps electrically operated, two pumps being installed in each station and provision made for a third to be installed at a later date.

The main trunk sewers running westward from The Point to Southwick Pumping Station and eastward from The Village to the same station have various sizes increasing from 9 inch to 24 inch and 18 inch respectively at the main Pumping Station. The subsidiary main sewers are 9 inch or 12 inch and in the roads in the various areas 6 inch or 9 inch, all these being constructed in salt glazed pipes except a small section in the Rainbow Road area where iron pipes were used due to the sewers being in running sand.

The Pumping Stations are situated (1) at the junction of High Street and Point Road which takes the area from The Point to Seaview Road, and (2) the High Street, opposite May Avenue, which takes the whole of Leigh Beck area from Seaview Road to May Avenue on the



south side and Rainbow Road, Mornington Road and Wittem Road area in the north. The third station is at Furtherwick Road and takes in the Maisonwyck Estate, Labworth Estate and the area south of these Estates and sewage from this area links with the main flow at the junction of Furtherwick and Long Roads.

The Engineer and Surveyor to the Canvey Island Council (Mr. R. H. Stevens) has given the following interesting detail relating to the flooding of the main drainage system on the Island on the night of the 31st January/1st February, 1953. This disastrous flooding resulted in all four of the sewage pumping stations being completely flooded, and as each station is below ground level, this presented the Local Authority with a difficult problem. From Tuesday, 3rd February it was possible to arrange with the County Fire Service to commence pumping out the water from the Pumping Stations. As each station was pumped dry, the Council's Pumping Station Engineer, with assistance from the Eastern Electricity Board, removed all the electrical apparatus including the switchboards, electric motors, starting controls, etc. and these were despatched by the Eastern Electricity Board to various works for stripping down, drying out, cleaning, repairing and re-assembly. The removal of the equipment presented no small problem, but this was overcome by the strenuous efforts of the Engineers. By Thursday, 5th February, all the equipment had been removed. The matter was further complicated in that the Electricity Board's transformers, which were situated in the main pumping station, were affected in a similar manner, and the flooding caused a complete breakdown of the electricity supply to the Island. The Electricity Board's Engineers worked night and day to restore the electricity supply to the Island and their efforts, under very difficult conditions, were very much appreciated by the Local Authority. On Wednesday, 11th February, the equipment from the Pumping Stations was returned and by this time the pumps had been cleaned, checked, and necessary repairs carried out and a round the clock effort was commenced to install the electric motors and equipment to re-start the pumping stations. Temporary wiring was installed from the temporary transformers set up by the Electricity Board and in the early hours of Thursday, 12th February, the first pumping station started operating, and the other stations during the next 48 hours. To appreciate the difficulties one must remember that the whole of the sewers and drains on the Island were surcharged and even at this time in many areas the manholes were under a foot or more of water. Pumping continuously, the water level in the sewerage system was gradually reduced and one week later, by Thursday, 19th February, the system was back to normal. Great credit is due to the Council's Pumping Station Engineer for his work during this period, when he maintained the pumps and electrical equipment, which, in many cases, had only been temporarily repaired, to stand up to this tremendous pumping effort. Once the system was working normally, all the Council's sewers were inspected and flushed out where necessary so as to remove silt deposits. By the end of February, the whole of the drainage system was back to normal working.

Despite the difficulties associated with the disastrous flooding of the area, the Council have energetically pursued their policy of

extending sewers in the area and 4,539 feet of new sewers have been provided in the area during the year. The extension of the sewer to serve the Dutch Village area has justified a long felt want. Of the 45 properties to be served by this extension, 37 have already been connected. New sewer connections during 1953 totalled 179 including 74 new Council Houses. During the past six years  $5\frac{3}{4}$  miles of new sewers have been provided and 1,262 properties have been drained to the main sewers in the area.

The **Rayleigh** Urban District is served by two Sewage Disposal Works, one situated to the north of Connaught Road which drains the areas east of the High Street, and the other at Watery Lane which drains the area west of the High Street. Both these areas drain by gravitation to the respective Disposal Works with the exception of a small area in the vicinity of Hullbridge Road which drains by gravitation to the Pumping Station in Watery Lane, from which it is pumped by means of an electrically operated pump and pumping main to the Western Sewage Disposal Works. A small part of the District in the vicinity of Rayleigh Avenue and Eastwood Rise drains into the sewers of the Southend Corporation, and sewage from a small area of the Benfleet Urban District on the south side of the Arterial Road drains into the Rayleigh sewers and is conveyed to the Eastern Sewage Disposal Works for treatment.

The Eastern Sewage Disposal Works consists of two detritus chambers, two vertical flow sedimentation tanks, two storm water tanks, two circular percolating filters, one humus tank and twelve sludge beds, together with an engine house, in which is housed a Deisel engine and pump for pumping sludge from the various tanks to the sludge beds. The description of the Western Sewage Disposal Works is the same except that the number of sludge beds there is six and the engine for pumping the sludge is petrol driven.

It is estimated that the main sewers serve 87% of the properties in the Rayleigh Urban District and during 1953 181 new houses and 24 existing houses were connected to the main drainage system. Work was completed during the year in the sewerage of an estate where the absence of sewers has for many years given rise to nuisances. On fifteen occasions it was found necessary to deal with nuisances associated with drainage systems.

About 288 houses and bungalows in the District are provided with cesspools and a further 197 with earth closets.

### **Public Cleansing.**

In the **Benfleet** Urban District, house refuse is disposed of by controlled tipping on the Benfleet Marshes. In this system, refuse is tipped in orderly layers and covered with suitable innocuous material. At the completion of the tipping the land will have been raised to such a level that it can be used for recreation purposes.

During the year, refuse was collected from all accessible parts of the District and the service functioned satisfactorily. Efforts to salvage all materials of value continued, and the sum of £1,705 was received from the sale of such materials.

The **Canvey Island** Urban District Council has maintained a regular fortnightly house to house collection of domestic refuse, and trade refuse is collected on payment as required. Disposal is by means of controlled tipping. The Council are in process of acquiring a large parcel of land in the Newlands area which will be used as a permanent tip.

During 1953 the filling in of unsightly depressions on Council land in the vicinity of the sea front was completed and during the summer period refuse was deposited at a private disposal dump.

At **Rayleigh** the Urban District Council undertakes a regular house to-house collection of refuse and salvage throughout the District, the collection being at weekly intervals on made-up roads and at fortnightly intervals elsewhere. Collection is made by two side loading vehicles, with representative capacities of 13 and 7 cubic yards for the refuse, and two trailers for the salvage. Disposal is by the controlled method of tipping.

Night soil was collected at weekly intervals from 91 premises during the year.

147 tons of material was salvaged and produced an income of £1,071.

### **Factories Act, 1937.**

In the area covered by the **Benfleet** Urban District there is a total of 73 factories on the register of the Local Authority. 68 of these premises employ mechanical power. Inspections were made on 87 occasions during the year and 12 defects found. By the end of the year 11 of these defects had been remedied by the occupiers. No legal proceedings were taken. Also, 12 work-places were inspected and one defect found, which was subsequently remedied.

There are 30 factories shown on the latest list of factories operating on **Canvey Island**, two of these previously being registered without mechanical power but now in the power category. This figure is nine less than listed in 1952, presumably owing to such being operated by self employed occupiers only.

Notice was served on one factory on account of industrial waste which was found to be interfering with the efficient working of the firm's drainage system and also affecting the Local Authority's Pumping Station on the trunk sewer. The nuisance was eliminated by the construction of a special settlement tank.

The **Rayleigh** Urban District has 48 premises registered as factories under the Act and 47 of these employ mechanical power. During the year 30 inspections were made and no defects were found.

### **Moveable Dwellings.**

**Caravans**—The Hart Road Caravan Park, established by the **Benfleet** Council, continues to meet a need, and there were 169 caravans stationed there at the end of the year.



The commercial caravan camps for holiday purposes at **Canvey Island** caused no trouble during the year, such camps appearing to be still very popular.

There are no licensed caravan sites in the **Rayleigh** Urban District.

**Houseboats**—For many years the **Benfleet** Urban District Council has been concerned with the dilapidated condition of some of the houseboats in Benfleet and Church Creeks, and with the pollution of the river water by the discharge of waste matters. Powers to control houseboats have now been given by the Essex County Council Act, 1952 and from April, 1953 no houseboat can be moored without the consent of the Council, which consents may be conditional.

Notices requiring the removal or demolition of 28 houseboats were served during the year. An appeal against one of the notices was made by an owner to the local Court of Summary Jurisdiction, and the Court found in favour of the Local Authority. None of the notices had expired by the end of the year.

Action by the **Rayleigh** Urban District Council under the provisions of the Essex County Council Act, 1952 was still under consideration at the close of the year under review. There are seven houseboats within the District, all of which are moored at the River Crouch, Hullbridge. Only one is occupied as a permanent residence.

#### **Smoke Abatement.**

In the **Benfleet** Urban District ten smoke observations were made during the year but no proceedings were taken.

The **Benfleet** and **Canvey Island** Districts in particular were affected by the "smell" nuisance associated with the Thameside Oil Refineries. As already intimated earlier in the report, preventive measures were being actively pursued at the end of the year.

**Rayleigh** did not encounter any smoke problems during the year.

#### **Rats and Mice.**

In the **Benfleet** Urban District a total of 229 visits were made during the year in connection with inspections for, or treatment of, rats and mice.

At **Rayleigh**, 106 premises were treated during the period 1st April, 1953 to 31st March, 1954.

#### **Vermin.**

Three cases of verminous premises were encountered at **Rayleigh** during the year.

#### **Storage of Petroleum.**

Routine inspections in each of the three Districts were made during the year in respect of applications to store petroleum spirit. The



number of licences issued during 1953 was as follows—Benfleet 42, Canvey Island 10, and Rayleigh 21.

### **Pet Animals Act, 1951.**

During the year the **Benfleet** Council issued three licences in respect of the keeping of tortoises, chickens up to the age of one month, and birds. Five visits were made to pet shops during the year and conditions were found to be satisfactory.

One licence was issued by the **Rayleigh** Council for the keeping of pets for sale.

### **Public Conveniences.**

In the **Benfleet** Urban District there were three Public Conveniences owned and maintained by the Local Authority at the end of the year. One is situate at Rushbottom Lane, Great Tarpots, one at Rectory Road, Hadleigh where a useful bus shelter is also provided, and the other at School Lane, South Benfleet, this latter being first opened to the public in April, 1953. A fourth Public Convenience was under construction during the year at Victoria House Corner, Hadleigh. Three inspections were made during the year of privately-owned Public Conveniences in the Benfleet area, and on each occasion they were found to be in a clean and satisfactory condition.

At **Canvey Island** there are five Public Conveniences which are owned and maintained by the Local Authority. One is in the Long Road near Furtherwick Corner, one in the High Street, one in Seaview Road, and two on the Sea Front—one at Labworth and one at Thorney Bay.

The **Rayleigh** Urban District Council provides a modern Public Convenience in the centre of the main shopping and business area.

### **Markets.**

The only market in the three Districts is situate in **Rayleigh** and is privately owned. Business is held every Wednesday morning and the goods sold include foodstuffs and general items.

### **Infectious Diseases.**

In the **Benfleet** Urban District the Sanitary Inspectors made 110 visits to premises following the notification of infectious diseases. Also, 50 visits were made to the contacts of such diseases. Disinfection was carried out at 11 dwellings.

At **Canvey Island**, a total of 65 visits were made in connection with infectious diseases and contacts associated therewith. The disinfection of premises was carried out where necessary.

The Sanitary Inspector for the **Rayleigh** Urban District made 49 visits during the year for the purpose of investigating the circumstances associated with the occurrence of infectious diseases and of contacts living locally of cases occurring in other areas. Disinfection was carried out at 14 of the premises so affected.

## General.

The Sanitary Inspector's Department of the **Benfleet** Urban District Council made a total of 2,544 visits during the year. These can be classified as follows—

General sanitation	..	..	..	812
Meat and Food Inspections	..	..	..	1,021
Housing	..	..	..	547
Infectious Diseases	..	..	..	164

109 Informal Notices and 36 Statutory Notices were served. There were 43 Notices outstanding at the commencement of the year. During the year 122 Notices were complied with, leaving 30 not complied with at 31st December, 1953. No legal proceedings were taken during the year. A total of 119 complaints were received, 18 of which related to matters which were not within the scope of the Public Health Department.

At **Canvey Island**, the disastrous flooding of the area interrupted many of the normal duties of the Department and added many new problems. The following is a summary of the 5,170 visits which were made by the Sanitary Inspector's Department during the year—

Flood Emergency	..	..	..	2,569
New drainage works	..	..	..	933
Housing repairs	..	..	..	418
Housing inspections	..	..	..	67
Nuisances	..	..	..	150
Water supplies	..	..	..	140
Refuse collection and disposal	..	..	..	144
Rodent control	..	..	..	126
Food inspections	..	..	..	154
Brown-tail moth control	..	..	..	84
Houseboats	..	..	..	39
Factory inspections	..	..	..	45
Dykes	..	..	..	64
Miscellaneous	..	..	..	237

The number of complaints received during the year was 261, including 46 concerning Brown-tail Moth caterpillars. During the year 87 Informal Notices were served of which 64 were complied with. Two Statutory Notices were served during the period under review and were complied with.

In the **Rayleigh** Urban District the Sanitary Inspector's Department received 117 complaints during 1953 and in connection with these and general routine work, 1,380 visits and inspections were made. Such visits were associated with the detection and abatement of nuisances, the repair and improvement of dwelling-houses, the abatement of overcrowding, the re-housing of persons inadequately housed, the storage of petroleum, the keeping of animals, the eradication of rats and mice, the administration of the Factories Act, Shops Act, Milk and Dairies Regulations, the inspection of food and food premises, enquiries into cases of infectious diseases and food poisoning, water

supply surveys, moveable dwellings, refuse collection and the collection of salvage, etc.

During the year it was found necessary to serve 20 Informal Notices and in one instance this was succeeded by a Statutory Notice. At the end of the year, 10 Notices were yet to be complied with. Works were completed during the year in respect of 51 instances where the service of Notices was found not to be necessary. 23 Notices, including thirteen from the previous year, were complied with during 1953. The following is a summary of all the completed works referred to—

Houses repaired	..	..	..	23
Existing houses connected to main sewer	..	..	..	24
Existing houses connected to water mains	..	..	..	3
Nuisances abated other than above				24

## SECTION " D "

### HOUSING

#### **Benfleet U.D.**

During the year 66 complaints regarding housing defects were received and 61 Notices were served. At 31st December, 1953, 27 Notices were outstanding.

Demolition Order procedure under Section 11 of the Housing Act, 1936 was taken in respect of five houses and three Orders were made.

There were 600 applications for Council Houses on the waiting list at the end of the year, including 89 applicants for Old People's Bungalows. During the year 32 Council Houses were completed. A further 121 dwellings were erected by private builders. 19 dwellings were still under requisition at the end of the year.

During 1953 two licences were issued in respect of repairs or extensions to dwelling-houses, the value of such licences being £1,320. Also, one licence was issued in the sum of £780 in respect of the conversion of a dwelling into two flats. One additional unit of accommodation was provided by this conversion. Three further licences were issued in the total sum of £5,045 in respect of the extension of roads and services.

At the 31st December, 1953 there were 169 caravans on the Council's Caravan Park in Hart Road, Thundersley, all available pitches being occupied.

#### **Canvey Island.**

During the year 44 complaints of housing defects were received of which 40 necessitated action being taken.

At the end of the year there were 311 applications for Council Houses on the waiting list. During the year 74 new Council properties were completed and the same number of families were re-housed.

The only requisitioned properties now under the control of the Council are two ex-military camps. All private property was de-requisitioned by 31st March, 1954.

One property was demolished by the owner prior to action being taken by the Council. Demolition orders on two properties have been suspended as the owners have given undertakings not to use the premises for human habitation. Closing orders have been made on parts of two properties.

### Rayleigh U.D.

23 houses were repaired or improved during the year.

The number of families on the Council's Housing List at the 31st December, 1953 was 318 as compared with 483 at the end of 1952.

Of the 181 new houses erected during the year, 44 were Council Houses and 137 privately built. Since May 1945 a total of 543 houses have been erected within the Urban District. Of these, 246 were Council Houses, 328 privately built and 13 were war damage re-builds.

## SECTION " E "

### INSPECTION AND SUPERVISION OF FOOD

#### Milk.

In the **Benfleet** Urban District the following licences were issued during the year under the provisions of the Milk (Special Designations) Regulations, 1949—

	Pasteurised	Sterilised	Tuberculin Tested
Dealer's Licences ..	13	38	4
Supplementary Licences	5	6	5

The Benfleet District also had the following registrations at 31st December, 1953 under the provisions of the Milk and Dairies Regulations, 1949—

Number of persons carrying on the trade of distributor	37
Number of premises used as dairies	1

During the year 26 visits were made to dairies and milk shops in the Benfleet Urban District and the following samples were taken—Pasteurised Milk (11), Sterilised Milk (6), Tuberculin Tested Milk (8), and Raw Milk (2). All 27 samples proved to be satisfactory upon examination.



In the **Canvey Island** Urban District the following licences were issued under the provisions of the Milk (Special Designations) Regulations, 1949—

		Pasteurised		Sterilised		Tuberculin Tested
Dealer's Licences	..	13	..	24	..	1
Supplementary Licences		2	..	3	..	2

The following licences were issued in the **Rayleigh** Urban District under the provisions of the Milk (Special Designations) Regulations, 1949—

		Pasteurised		Sterilised		Tuberculin Tested
Dealer's Licences	..	2	..	11	..	1
Supplementary Licences		1	..	1	..	1

During the year 20 samples of milk were taken in the Rayleigh area. These consisted of 12 Tuberculin Tested, 12 Pasteurised, one Tuberculin Tested Pasteurised, and 4 ungraded. Only one of these samples failed to satisfy the test. The 12 samples of Pasteurised Milk and the one sample of Tuberculin Tested Pasteurised Milk were also subjected to a Phosphatase Test, and all were reported as having been satisfactorily heat treated.

### Meat Inspection.

The Sanitary Inspectors of the Benfleet Urban District Council paid 511 visits to the Ministry of Food Slaughterhouse at Cross Farm, Hadleigh during the course of the year, and the carcasses and organs of 15,231 food animals were examined, as set out below—

		Cattle, excluding Cows		Cows		Calves		Sheep and Lambs		Pigs
Number killed	..	2,427	..	1,276	..	2,215	..	8,106	..	1,207
Number inspected		2,427	..	1,276	..	2,215	..	8,106	..	1,207

#### *All diseases except Tuberculosis :*

Whole carcass condemned	..	8	..	7	..	11	..	3	..	6
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Carcasses of which some part or organ was con- demned	..	631	..	405	..	5	..	314	..	110
--	----	-----	----	-----	----	---	----	-----	----	-----

Percentage of the number inspected affected with disease other than Tuberculosis	..	26.3	..	32.3	..	0.72	..	3.9	..	9.6
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*Tuberculosis only :*

Whole carcasses condemned ..	11 ..	18 ..	2 ..	— ..	3
Carcases of which some part or organ was con- demned .. ..	203 ..	280 ..	— ..	— ..	35
Percentage of the number inspected affected with Tuberculosis ..	8.8 ..	23.4 ..	0.09 ..	— ..	3.15

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62 carcasses of beef (1.68%) were found to be affected with *Cysticercus Bovis*. In one case the condition was generalised.

During the year, specimens from two cows were submitted for bacteriological examination to the Public Health Laboratory, Westcliff-on-Sea. Also, one specimen was submitted to the Pathologist, Southend General Hospital. The Inspectors wish to express their appreciation for the ready assistance they received in this respect.

Constant vigilance is needed by all concerned in the handling of meat to ensure the observance of hygienic practices.

All slaughtering took place at the Ministry of Food Slaughterhouse, Cross Farm, Benfleet Road, Hadleigh.

There are no slaughterhouses on **Canvey Island** but routine inspections were maintained during the year among the Butchers' Shops in the area. These were maintained in a cleanly condition.

In the **Rayleigh** Urban District it is estimated that the Ministry of Food slaughterhouse situate at the premises of Messrs. Websters, Family Butchers, High Street, Rayleigh, serves a population of approximately 120,000, chiefly from the County Borough of Southend-on-Sea. Consequently, Inspectors from that Authority share the work of meat inspection with the Rayleigh Council's Sanitary Inspector.

During the year 13,505 animals were slaughtered and examined at the Rayleigh slaughterhouse, as detailed below—

	Cattle, excluding Cows		Cows		Calves		Sheep and Lambs		Pigs	
Number killed ..	2,219	..	634	..	496	..	4,338	..	5,818	
Number inspected	2,219	..	634	..	496	..	4,338	..	5,818	

*All diseases except*

*Tuberculosis :*

Whole carcasses condemned ..	—	..	5	..	2	..	6	..	114	
Carcases of which some part or organ was con- demned .. ..	658	..	184	..	—	..	165	..	379	
Percentage of the number inspected affected with disease other than Tuberculosis ..	29.7	..	29.8	..	.4	..	3.9	..	8.5	

*Tuberculosis only :*

Whole carcasses condemned ..	6	..	12	..	—	..	—	..	20	
Carcases of which some part or organ was con- demned .. ..	219	..	123	..	—	..	—	..	78	
Percentage of the number inspected affected with Tuberculosis ..	10.1	..	21.3	..	—	..	—	..	1.7	

13 cases of *Cysticercus Bovis* were diagnosed and the carcasses were dealt with in accordance with approved policy.

### Food Inspection.

In the **Benfleet** Urban District 477 visits were made to the various food premises during the year in connection with the requirements of the Food and Drugs Act, 1938 and the Byelaws made under Section 15 of that Act. There were 190 food shops in the District at 31st December, 1953, made up as follows—

Cafes .. ..	36
Fishmongers .. ..	10
Butchers .. ..	17
Bakers .. ..	6
General Provisions .. ..	73
Greengrocers .. ..	14
Others, including Confectioners and Stalls	34

31 of the General Provisions shops are registered for the sale of milk, and also two other shops.

During the year, the following foods were surrendered by food traders as being unfit for human consumption—

Eggs, 37 doz.; milk, 90 tins ; canned meat, 60 tins ; wet fish, 381 lbs.; canned fish, 7 tins ; vegetable foods, 48 tins ; fruit and preserves, 378 tins and jars ; soup, 5 tins ; cooked ham, 5 tins ; sponge mixture, 1 pkt.; meat, 638 lbs.; bacon, 5½ lbs.; sausages, 22 lbs.; other foods, 2 tins.

Three samples of foods were submitted for bacteriological examination during the year, all of which were satisfactory, no pathogens being isolated. No special examination of any large stock or consignment was found necessary during the year.

In connection with the Clean Food Campaign, routine visits are carried out at all food premises twice yearly. The visits are not made at regular intervals, nor are the occupiers advised as to the date of visits. Reliance is placed upon personal contact to advise and encourage food handlers in matters of food hygiene. At present, the greatest obstacles to be overcome by the personnel of food preparing establishments are unsuitable premises and the lack of working area in kitchens.

Unsound meat from Cross Farm Slaughterhouse is disposed of by the Ministry of Food. Local Authorities of the areas to which such meat is taken are notified. Other unsound foods are buried in the Council's refuse tip.

**SCHOOL CANTEENS.** The three School Canteens within the Benfleet Urban District were maintained in a very clean and satisfactory condition during the year.

**STREET TRADING.** There is very little street trading carried on in the Urban District of Benfleet other than the house-to-house sale of greengrocery. Nine food hawkers and their storage premises were registered under the provisions of the Essex County Council Act, 1952. These provisions, together with the Byelaws made under Section 15 of the Food and Drugs Act, 1938 should result in an improvement in food handling in the open air.

**MANUFACTURED MEAT PRODUCTS.** At the end of the year there were 15 butchers' premises and one factory in the Benfleet Urban District which were registered under the provisions of the Food and Drugs Act, 1938 for the manufacture of preserved foods, etc. 32 visits were made to such premises during the year.

At **Canvey Island** 154 visits were made in connection with food premises during 1953, other than special visits made in connection with the flooding of the area. The following is a list of unsound food which was surrendered as being unfit for human consumption—

Canned meat, 36 tins ; canned fish, 12 tins ; canned fruit and



vegetables, 230 tins ; canned milk and cream, 12 tins ; fresh fish, 30 lbs.; fresh meat, 59½ lbs.; rabbits, 45 ; cheese, 4 lbs.; biscuits and cereals 188½ lbs.

Following the Flood Disaster 67 food premises were inspected and all affected food was withdrawn from sale. It is impossible to give a full list of the individual items, but the following is a brief summary of the food dealt with—

Canned goods fit for re-conditioning .. ..	18,000 tins
Cereals, flour and biscuits fit for animal feeding	3½ tons
Bottles, jars, cans and packets unfit for any purpose .. .. .	4,300 items
Other unfit food not included in above (approx.)	10 tons

There are 114 food premises on the Island, summarised as follows—  
Butchers 10 ; Greengrocers 11 ; Grocers and Bakers 33 ; Cafes 41 ; Fishmongers 4 ; Public Houses 5 ; Factory Canteens 6 ; School Canteens 4. A total of 53 premises are registered under Section 14 of the Food & Drugs Act, 1938, as follows—Manufacturers of Ice Cream 2 : Sale of Ice Cream 45 ; Manufacturers of Sausages, etc. 6.

In the **Rayleigh** Urban District 240 visits were made to food premises during the year by the Sanitary Inspector in connection with the requirements of the Food and Drugs Act, 1938. The standard of food shops, restaurants and cafes within the District is generally high and there is a general desire among proprietors to make their premises more wholesome and attractive.

During the visits to premises where food is prepared it is the practice of the inspectorial staff to discuss the processes with the proprietors and the employees, and it is thought that in these discussions much is learned by all concerned to further the progress of the clean food campaign.

There are 74 premises in the District where food is prepared or sold for human consumption, the number in each type of business being as follows—

Butchers .. .. .	8
Grocers .. .. .	22
Bakers and Pastrycooks .. ..	3
Greengrocers .. .. .	7
Confectioners .. .. .	9
Fish shops (wet) .. .. .	1
Fried fish shops.. .. .	2
Cafes and Restaurants .. ..	10
Cooked Meat Manufacturers .. ..	2
Public Houses .. .. .	7
Factory canteens .. .. .	1
School canteens .. .. .	2

There are seven premises registered for the manufacture of meat products and two for fish frying.

The following foodstuffs weighing approximately 13 cwts. were voluntarily surrendered by shopkeepers during the year and condemned as being unfit for human consumption—

.. Canned meat, 10 cwts.; miscellaneous canned goods, 3 cwts.

**SCHOOL CANTEENS.** There are two canteens at schools in the Rayleigh area and neither are of an adequate size nor of suitable design, taking into consideration the number of meals prepared. Various improvements have, however, been carried out to facilitate working within the restricted working area. The whole of the canteen services are at present under review by the Education Authority.

### Ice Cream.

At the end of 1953 there was a total of 81 premises in the **Benfleet** Urban District registered for the storage and sale of ice cream in accordance with the Food and Drugs Act, 1938, made up as follows—

General provisions shops	..	..	26
Confectioners shops	..	..	23
Cafes	..	..	23
Miscellaneous	..	..	9

A total of 189 visits were made to such premises during the year. All the premises receive their supplies of ice cream in bulk from outside the District.

The Sanitary Inspectors submitted 24 samples of ice cream for bacteriological examination during the year, and the results obtained showed that 10 were placed in Grade I, 3 in Grade II, 8 in Grade III and 3 in Grade IV. Results showing Grades I and II are considered to be satisfactory, whilst those in Grades III and IV are unsatisfactory. Also, three samples of water ice were submitted for examination, and all proved to be satisfactory. Copies of the Laboratory reports were sent in all cases to the Local Authorities in whose areas the ice cream was manufactured.

There are 45 premises registered as vendors of ice cream at **Canvey Island** and ice cream is manufactured at two premises. The majority of ice cream consumed in the area is made by large firms with factories outside the area. During the year 10 samples were taken and submitted to the Southend Public Health Laboratory for bacteriological examination. The results obtained showed that 3 were placed in Grade I, one in Grade II, 5 in Grade III and one in Grade IV. Appropriate action was taken in respect of those samples falling in Categories III and IV.

There are no manufacturers of ice cream in the **Rayleigh** Urban District, but 30 premises are registered for the sale thereof. Ice cream is also sold in three cafes and a cinema, but these are exempt from registration.

During the year eleven samples of ice cream were taken from retailers' premises for bacteriological examination, and reports from the analyst showed that 8 samples were placed in Grade I, 2 samples in Grade II and one sample in Grade III. Suitable action was taken in respect of the unsatisfactory sample.

### Shellfish.

Shellfish, particularly cockles, harvested from the Thames Estuary continued to give rise to apprehension from the Public Health point

of view and during the year no less than ten different specimens of cockles submitted from retailers in Benfleet and Canvey Island were reported by the Public Health Laboratory as being unsatisfactory.

The difficulty from the administrative standpoint is that there is no statutory grading for the examination of cooked shellfish. Accordingly, it may well be that the standard adopted by the Southend Public Health Laboratory is higher than necessary in view of the absence in the area during 1953 of reported cases of food poisoning associated with the consumption of shellfish. From the laboratory point of view, it is not possible to determine at just what level of contamination cockles are likely to give rise to food poisoning conditions.

Following the outbreak of Food Poisoning in Southend in 1949 associated with shellfish, the Director of the Public Health Laboratory (Dr. R. Pilsworth, M.D.) published a detailed account in the Monthly Bulletin of the Ministry of Health and the Public Health Laboratory Service (June 1952). He stated that cooked shellfish, which was the cause of the trouble, provided an inert and nutritious medium for the growth of bacteria. There was always the risk that cooked shellfish would become recontaminated by uncooked shellfish awaiting treatment. The weight of evidence seemed to point to contamination arising chiefly whilst the cockles are in transit or after they arrive at the premises of the retailer, where, in many instances, there are ample opportunities for contamination. This contamination is more probably a function of time and temperature rather than of contamination derived from the retailer himself or his premises. Also, it is difficult to assess accurately what extra amount of contamination results from retail handling, considering the variable condition of the fish as it arrives from the producer. The retailer can never supply a sample of a higher bacterial standard than that of the fish supplied by the producer and it is difficult for him to maintain this standard if he has to keep it for any length of time in the absence of refrigeration. There is one other possible source of contamination which should not be overlooked ; this is from human sources during the washing process after cooking at the producers premises.

The supervision in these areas of the retail sale of shellfish, particularly cockles, is strictly maintained. I am informed that the cockle industry in the County Borough of Southend, from which area our local retailers obtain practically all their supplies, is safely and well conducted, and is ahead of similar places in other parts of the Country. Naturally, the standard of bacterial purity must come from the producer first, and the Southend Health Department are alive to this necessity in the interests of the industry. The chief difficulty lies in the time lag between producer and consumer, and this is the problem which faces local Public Health Departments in regard to the prevention of food poisoning from cockles which have become contaminated after leaving the producer's premises. However, strict vigilance is maintained in regard to the packing and transporting of cockles from producers in the Southend area to retailers at Benfleet and Canvey Island.



## SECTION " F "

### PREVALENCE OF, AND CONTROL OVER, INFECTIOUS AND OTHER DISEASES

A general review of some of the infectious diseases which claim the active attention of Public Health Departments was made at the beginning of this report. There a broad view was taken—here it is intended to briefly outline details of local involvements of communicable diseases in the area during the year.

**Measles.** This was a year of average incidence, there being 533 cases in the three areas as compared with 926 in 1951 when the highest recorded incidence of this disease occurred both locally and nationally. In relation to the size of the area, the greatest local incidence in 1953 was at Canvey Island where 227 cases were notified. One fatal case in which broncho-pneumonia supervened occurred at Hadleigh. Only four cases are recorded as having been admitted to hospital on medical advice.

**Whooping Cough.** Only 109 cases were notified in the three areas during 1953, the majority coming from the Benfleet Urban District where the parishes of Thundersley and South Benfleet were chiefly affected. Only two cases were admitted to hospital.

**Scarlet Fever.** The incidence of Scarlet Fever was much lower than the previous year, there being 38 notified cases as against 111 in 1952. In most instances the disease was very mild and the necessity for ten of the cases to be admitted to hospital was most probably associated with difficulties of isolation at home. The one unconfirmed case was re-diagnosed in hospital as German Measles. Another child had Whooping Cough at the same time.

**Diphtheria.** For the fifth year in succession the three Districts have remained completely free from Diphtheria.

**Sonne Dysentery.** No actual cases were notified during the year but there were a few involvements associated with this disease. Two children from London were reported as suffering from Sonne Dysentery after returning from a holiday at Canvey Island. A boy from Rayleigh was discovered in hospital as a dysentery "Carrier," and a Thundersley girl employed as a Children's Nurse at Shoeburyness was found to have positive stools on examination. In all these matters and in association with various dysentery contacts brought to the notice of the Department during the year, careful observation and supervision was maintained by the Inspectorial staff, and I am glad to report that there were no involvements.

**Poliomyelitis.** During 1953 the area in and around Hadleigh was chiefly affected where nine confirmed cases were reported, one of which was diagnosed in hospital and was notified to the County Borough of Southend-on-Sea. Two other cases were notified from



residents at South Benfleet and one from Rayleigh. Canvey Island remained completely free.

Two of the Hadleigh cases were paralytic, both of which are believed to have made a good recovery. Although, as far as Hadleigh was concerned, the incidence was much higher than experienced hitherto, the majority of the cases were mild non-paralytics which recovered rapidly.

There were a number of suspected cases in Hadleigh and Rayleigh, one of which had an interesting clinical history. The patient was a man from Rayleigh who, after examination in hospital, was found negative to Poliomyelitis and was regarded as a possible case of Glandular Fever. However, despite thorough tests in hospital, the final diagnosis was inconclusive.

A great many contacts of cases of Poliomyelitis, both from within and without the area, were brought to the notice of the Department. These called for strict supervision and I am glad to say that no connected cases were reported. Credit is due to the inspectorial staff for their vigilance in view of the very considerable amount of extra work involved.

Acute Poliomyelitis first became notifiable by regulation in 1912, but it was not until 1947 that the disease became noticeable in epidemic form. Since that year Poliomyelitis has been recognised as presenting a major problem for Public Health officials, especially in view of its obscure method of spread. The Public Health (Acute Poliomyelitis, Acute Encephalitis and Meningococcal Infection) Regulations, 1949 were a step forward to greater clarity in regard to classification and notification of the group of diseases associated with the central nervous system. Under these Regulations, Poliomyelitis has for the first time been divided into paralytic and non-paralytic, and experience has proved that this was a very wise adjustment of legislation, particularly as a large percentage of all cases now notified are non-paralytic.

In order to present a clear and balanced picture of the incidence of poliomyelitis in these Districts during post-war years, a detailed summary has been compiled and is shown below—

SUMMARY OF CASES OF CONFIRMED POLIOMYELITIS OCCURRING IN THE BENFLEET, CANVEY ISLAND & RAYLEIGH URBAN DISTRICTS BETWEEN 1946 and 1953

Year	Sex		Age Group			Non-		Fatal
	Male	Female	0-4	5-15	Over 15	Paralytic	Paralytic	
1946 ..	—	1	—	—	1	1	—	—
1947 ..	2	—	—	1	1	2	—	1
1948 ..	—	1	1	—	—	1	—	—
1949 ..	3	2	2	3	—	4	1	—
1950 ..	4	2	3	2	1	4	2	—
1951 ..	1	1	—	1	1	2	—	—
1952 ..	3	3	2	2	2	5	1	1
1953 ..	9	3	3	8	1	3	9	—
Totals ..	22	13	11	17	7	22	13	2

### Totals by Districts—

Benfleet U.D. . . 19 (Hadleigh 8, Thundersley 6 and South Benfleet 5)

Canvey Island U.D. 10

Rayleigh U.D. . . 6

Of the 22 paralytic cases, 6 were under five years of age, 10 were between 5 and 15 years, and 6 were over 15 years.

Of the two fatal cases, the first was a boy aged 12 years who died from respiratory paralysis at his home at Daws Heath after nearly five months treatment in hospital. The second fatal case occurred at South Benfleet, the patient being a man aged 31 years. Death rapidly followed the onset of the disease and diagnosis was only determined by post mortem examination.

Apart from the two fatal cases, there were three other cases which were very serious, as follows—

(a) A girl aged 11 years from Canvey Island who contracted the disease in 1949. She received prolonged hospital treatment and suffers permanent incapacity.

(b) A boy aged 4½ years from Rayleigh who was notified in 1952. This was a severe case but a remarkable recovery has been made. Treatment is continuing.

(c) A boy from Hadleigh, aged 9 years, who was also notified in 1952. He suffered from Bulbar paralysis and was on the danger list in hospital. He is understood to have made a complete recovery.

Approximately eight further cases among those classified as paralytics were considered to be of moderate severity where some measure of permanent disability is evident.

**Non-notifiable Infectious Diseases.** The only real guide that the Medical Officer of Health has of the incidence of infectious diseases not statutorily notifiable is from reports of Head Teachers of locally maintained schools. The following is a summary of infectious conditions which have been brought to the notice of the Department in this way—

	Benfleet	Canvey Island	Rayleigh
Chicken Pox .. ..	80	1	8
German Measles .. ..	77	—	3
Mumps .. ..	14	—	47

One female child aged 5 years died from a rare complication of Chicken Pox during the year.

**Food Poisoning.** Only one case of food poisoning was notified during the year. The patient was a woman aged 40 years, and although shellfish were implicated, the results of investigations made were inconclusive.

Information was received from the Southend General Hospital

that a woman aged 30 years who was attending the Out-patient Department from Thundersley, had Salmonella infection as revealed in her stools on examination. Investigations were carried out at the patient's home but no causal agent could be detected.

**Tuberculosis.** The death rate for Tuberculosis in England and Wales during 1953 fell by 15.9%, there being 8,902 deaths from Tuberculosis of all forms in 1953 as compared with 10,585 in 1952 and 21,953 in 1948—a fall of almost two thirds in five years. In Essex, deaths from Tuberculosis numbered 292 in 1953, and although this figure was slightly higher than that for 1952, it compares favourably with the figure of 393 in 1951 and 615 in 1948. As far as these Districts are concerned, the total of twelve deaths during the year was about average but well above last year's low record of five. In 1948 the corresponding figure was 23. The total number of new cases of Tuberculosis appearing on the Registers for 1953 was 46 as compared with 48 in 1952. In the three Districts, 44 names were deleted from the Registers during the year on account of removals to other areas, recoveries and deaths.

#### SUMMARY OF NEW CASES ADDED TO TUBERCULOSIS REGISTERS DURING 1953

				Respiratory		Non-Respiratory		Totals
				Male	Female	Male	Female	
<i>Benfleet U.D.</i>								
Notifications	..	6	4	..	2	1	..	13
Inward Transfers	..	6	6	..	—	1	..	13
<i>Canvey Island U.D.</i>								
Notifications	.	3	1	..	—	—	..	4
Inward Transfers	..	3	1	..	—	—	..	4
<i>Rayleigh U.D.</i>								
Notifications	..	3	2	..	1	1	..	7
Inward Transfers	..	2	2	..	1	—	..	5

#### SUMMARY OF DEATHS FROM TUBERCULOSIS

				Respiratory		Non-Respiratory				Totals
				Male	Female	Male	Female			
<i>Benfleet U.D.</i>										
1949	..	..	..	8	3	..	—	—	..	11
1950	..	..	..	1	4	..	—	—	..	5
1951	..	..	..	7	1	..	—	—	..	8
1952	..	..	..	2	—	..	—	—	..	2
1953	..	..	..	1	4	..	—	—	..	5
<i>Canvey Island U.D.</i>										
1949	..	..	..	—	3	..	1	—	..	4
1950	..	..	..	1	1	..	—	1	..	3
1951	..	..	..	1	3	..	—	—	..	4
1952	..	..	..	1	1	..	—	—	..	2
1953	..	..	..	4	—	..	—	—	..	4

*Rayleigh U.D.*

1949	..	..	..	3	1	..	1	..	5
1950	..	..	..	3	2	..	—	..	5
1951	..	..	..	2	—	..	—	..	2
1952	..	..	..	—	1	..	—	..	1
1953	..	..	..	3	—	..	—	..	3

**Cancer.** There were 95 deaths in the three Districts during the year which were attributable to Cancer, in one form or another, and these are summarised below. Although there was very little difference in the national mortality rate for Cancer in the years 1952 and 1953, the local incidence rose by 15 between the two years.

			Benfleet	Canvey Island	Rayleigh
Stomach	..	..	6	5	4
Lungs and Bronchus			6	3	5
Breast	..	..	4	1	4
Uterus	..	..	1	1	—
All other sites	..		25	14	16
Totals	..	..	42	24	29

The following deaths from Cancer, included in the above figures, occurred in persons under 50 years of age—

Benfleet	Canvey Island	Rayleigh
Male (45 yrs.) Pan- creas	Male (47 yrs.) Liver	Male (48 yrs.) Liver
Female (48 yrs.) Bowel	Female (49 yrs.)	
Lungs and Cervix		
Female (41 yrs.)		
Bronchus		
Female (45 yrs.)		
Breast		

The following summary shows the number of deaths from Cancer in England and Wales over the last five years. It is significant to notice that deaths from Cancer of the Lung and Bronchus throughout the Country have risen by 34% during the five year period, hence the reason for publicity on research measures as to the causal agents for this serious increase. The figures in brackets represent the combined cancer mortality under the respective headings, for the Benfleet, Canvey Island and Rayleigh Urban Districts.

		Lungs & Bronchus	All Other Sites	Totals
1949	.. M	9,350 (—)†	.. M 31,496 (—)†	.. M 40,846 (44)
	.. F	1,942 (—)†	.. F 37,944 (—)†	.. F 39,886 (35)
1950	.. M	10,254 (12)	.. M 32,322 (32)	.. M 42,576 (44)
	.. F	1,987 (6)	.. F 38,875 (38)	.. F 40,862 (44)
1951	.. M	11,166 (13)	.. M 32,482 (34)	.. M 43,648 (47)
	.. F	2,081 (3)	.. F 38,424 (40)	.. F 40,505 (43)
1952	.. M	11,981 (9)	.. M 32,347 (29)	.. M 44,328 (38)
	.. F	2,237 (2)	.. F 39,035 (40)	.. F 41,272 (42)
1953	.. M	12,876 (10)	.. M 31,938 (42)	.. M 44,814 (52)
	.. F	2,257 (4)	.. F 38,734 (39)	.. F 40,991 (43)

† Local detailed figures not available.



## RAINFALL

Details of the rainfall during the year have been provided by the Southend Waterworks Company in respect of their Thundersley Reservoir and by the Engineer and Surveyor of the Canvey Island Urban District Council in respect of that area.

The Thundersley record shows that a total of 17.83 inches of rain fell during the year—the lowest rainfall for a considerable period. The wettest months were July with 3.25 inches and April with 2.14 inches. The driest months were March with 0.32 inches, and November with 0.73 inches, although December and January were particularly dry.

At Canvey Island July was also the wettest month with a rainfall of 2.80 inches, although September and August had rainfalls of 2.29 and 2.13 inches respectively. The driest months were March, November, January and May with respective rainfalls of 0.28, 0.85, 0.86 and 0.97 inches.

## ACCIDENTS

The following figures have been supplied by the Chief Constable of Essex.

### SUMMARY OF PERSONS KILLED OR INJURED IN ROAD ACCIDENTS DURING 1953

Group of Road User	Killed		Seriously Injured		Slightly Injured
<i>Benfleet U.D.</i>					
Pedestrians under 15 years ..	—	..	2	..	5
Pedestrians 15 years and over	—	..	5	..	10
Drivers .. .. .	—	..	5	..	4
Motor Cyclists .. .. .	—	..	5	..	21
Pillion Passengers .. .. .	—	..	2	..	4
Pedal Cyclists under 15 years	—	..	4	..	7
Pedal Cyclists 15 years and over	1	..	4	..	22
Other persons under 15 years	—	..	1	..	6
Other persons 15 years and over	—	..	9	..	22
Totals .. .. .	1	..	37	..	101
<i>Canvey Island U.D.</i>					
Pedestrians under 15 years ..	—	..	2	..	5
Pedestrians 15 years and over	1	..	—	..	8
Drivers .. .. .	—	..	—	..	3
Motor Cyclists .. .. .	—	..	1	..	12
Pillion Passengers .. .. .	—	..	—	..	6
Pedal Cyclists under 15 years	—	..	—	..	3
Pedal Cyclists 15 years and over	—	..	2	..	10
Other persons under 15 years	—	..	—	..	2
Other persons 15 years and over	—	..	—	..	6
Totals .. .. .	1	..	5	..	55

*Rayleigh U.D.*

Pedestrians under 15 years ..	—	..	—	..	3
Pedestrians 15 years and over	—	..	5	..	6
Drivers .. .. .	—	..	4	..	7
Motor Cyclists .. .. .	—	..	12	..	8
Pillion Passengers .. .. .	1	..	4	..	3
Pedal Cyclists under 15 years	—	..	—	..	1
Pedal Cyclists 15 years and over	—	..	8	..	13
Other persons under 15 years	—	..	—	..	2
Other persons 15 years and over	—	..	8	..	15
Totals .. .. .	1	..	41	..	58
Totals for three Districts, 1953	3	..	83	..	214
Totals for three Districts, 1952	4	..	76	..	179
Totals for three Districts, 1951	5	..	82	..	187

# NUMBER OF ROAD ACCIDENTS OCCURRING DURING 1953

Class of Accident					Benfleet	Canvey Island	Rayleigh	
Fatal .. .. .	..	..	..	..	1	1	..	1
Injury .. .. .	..	..	..	..	115	48	..	77
Non-injury .. .. .	..	..	..	..	173	88	..	91
Totals .. .. .	..	..	..	..	289	137	..	169
Totals for 1952 .. .. .	..	..	..	..	272	101	..	156

## SECTION 47—NATIONAL ASSISTANCE ACT, 1948

No action was taken during the year under the provisions of this Act as amended by the National Assistance (Amendment) Act, 1951 in regard to the removal to suitable premises of persons in need of care and attention.

There was, however, a number of problem cases among the elderly which were brought to the notice of the Department during the year, and I am glad to say that with the co-operation of the various officials and Departments concerned, each case was dealt with without recourse to the provisions of the above mentioned Section.

## EXHUMATION

By order of the Chancellor of the Chelmsford Diocesan Registry an exhumation was carried out at Thundersley Churchyard in June when the remains of the parents of a man living in Hertfordshire were transferred to the Marylebone Cemetery at East Finchley. Certain precautions recommended by me were complied with.

# COMPARATIVE TABLE OF CERTAIN INFECTIOUS DISEASES

Infected Disease	1949	1950	1951	1952	1953
<i>Benfleet U.D.</i>					
Acute Pneumonia ..	12 ..	7 ..	4 ..	5 ..	10
Diphtheria .. ..	— ..	— ..	— ..	— ..	—
Erysipelas .. ..	5 ..	6 ..	4 ..	5 ..	3
Infectious Hepatitis ..	3 ..	2 ..	30 ..	6 ..	—
Measles .. ..	266 ..	22 ..	578 ..	67 ..	222
Meningococcal Infection	— ..	1 ..	— ..	— ..	—
Poliomyelitis .. ..	1 ..	1 ..	1 ..	3 ..	10
Scarlet Fever .. ..	52 ..	15 ..	7 ..	53 ..	25
Whooping Cough ..	49 ..	90 ..	77 ..	35 ..	71
<i>Canvey Island U.D.</i>					
Acute Pneumonia ..	2 ..	1 ..	1 ..	— ..	3
Diphtheria .. ..	— ..	— ..	— ..	— ..	—
Erysipelas .. ..	1 ..	— ..	— ..	— ..	—
Infectious Hepatitis ..	7 ..	6 ..	— ..	— ..	—
Measles .. ..	61 ..	18 ..	97 ..	32 ..	227
Meningococcal Infection	— ..	1 ..	— ..	— ..	—
Poliomyelitis .. ..	2 ..	3 ..	1 ..	1 ..	—
Scarlet Fever .. ..	1 ..	1 ..	2 ..	36 ..	8
Whooping Cough ..	2 ..	17 ..	13 ..	19 ..	21
<i>Rayleigh U.D.</i>					
Acute Pneumonia ..	3 ..	15 ..	7 ..	— ..	4
Diphtheria .. ..	— ..	— ..	— ..	— ..	—
Erysipelas .. ..	6 ..	11 ..	5 ..	9 ..	6
Infectious Hepatitis ..	— ..	— ..	— ..	6 ..	6
Measles .. ..	60 ..	14 ..	251 ..	7 ..	84
Meningococcal Infection	— ..	— ..	1 ..	— ..	—
Poliomyelitis .. ..	2 ..	— ..	— ..	2 ..	1
Scarlet Fever .. ..	5 ..	10 ..	1 ..	21 ..	5
Whooping Cough ..	7 ..	56 ..	35 ..	25 ..	17

## CERTAIN CAUSES OF DEATH IN ENGLAND AND WALES DURING LAST FIVE YEARS

Disease or Cause	1949	1950	1951	1952	1953
Cancer (Lung & Bronchus)	11,292	12,241	13,247	14,218	15,133
Cancer (all other Sites) ..	69,440	71,197	70,906	71,382	70,672
Diphtheria .. ..	85	49	34	32	23
Dysentery (all forms) ..	40	66	74	36	36
Infectious Encephalitis..	†	115	118	105	134
Influenza .. ..	5,664	3,896	16,123	1,750	6,465
Measles .. ..	308	221	317	141	244
Meningococcal Infection	288	279	299	290	291
Motor Vehicle Accidents	3,892	4,230	4,510	4,117	4,375
Poliomyelitis .. ..	657	755	215	275	320
Streptococcal Infections	20	93	65	64	61
Tuberculosis (all forms)	19,833	15,968	13,800	10,585	8,902
Venereal Diseases ..	2,060	1,729	1,771	1,619	1,445
Whooping Cough ..	527	393	457	184	243

† Figures not available.

CLASSIFIED SUMMARY OF ALL INFECTIOUS DISEASES (OTHER THAN TUBERCULOSIS)  
NOTIFIED DURING THE YEAR 1953

BENFLEET URBAN DISTRICT

Notifiable Disease	Cases included in Weekly Returns														Distribution			Sex		
	At ages														Deaths	Hadleigh	S. Benfleet		Th'sley	
	Admitted to Hospital																			
	At all ages	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 35	35 to 45	45 to 65	65 to and over							
Acute Pneumonia	10	—	—	—	—	—	1	1	—	—	1	2	5	—	—	5	—	5	4	6
Diphtheria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	3	—	—	—	1	—	—	—	—	—	—	—	2	—	—	1	—	2	2	1
Measles	222	3	21	18	22	25	126	6	1	—	—	—	—	1	1	79	70	73	113	109
Poliomyelitis	11	—	—	—	1	1	5	4	—	—	—	—	—	11	—	7	2	2	9	2
	(1)						(1)							(1)					(1)	
Puerperal Pyrexia	2	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	2	—	2
Scarlet Fever	26	—	1	4	2	3	15	—	—	1	—	—	—	6	—	8	5	13	13	13
	(1)						(1)							(1)				(1)	(1)	
Whooping Cough	71	8	8	6	8	8	28	1	2	1	—	—	1	1	—	11	33	27	35	36

N.B.—The figures in parenthesis indicate those cases where the diagnosis was corrected.



CLASSIFIED SUMMARY OF ALL INFECTIOUS DISEASES (OTHER THAN TUBERCULOSIS)  
NOTIFIED DURING THE YEAR 1953

CANVEY ISLAND URBAN DISTRICT

Notifiable Disease	Cases included in Weekly Returns														Admitted to Hospital	Deaths	Sex
	At Ages																
	At all ages	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 35	35 to 45	45 to 65	65 and over				
Acute Pneumonia	..	3	—	—	—	—	1	—	—	1	—	1	—	—	—	1	2
Diphtheria	..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	..	227	2	17	22	31	30	124	1	—	—	—	—	1	—	107	120
Scarlet Fever	..	8	—	—	1	—	—	7	—	—	—	—	—	—	—	3	5
Whooping Cough	..	21	—	1	4	3	4	8	—	—	1	—	—	—	—	11	10

CLASSIFIED SUMMARY OF ALL INFECTIOUS DISEASES (OTHER THAN TUBERCULOSIS)  
NOTIFIED DURING THE YEAR 1953

**RAYLEIGH URBAN DISTRICT**

Notifiable Disease	Cases included in Weekly Returns													Deaths Admitted to Hospital	M. F.	Sex
	At Ages															
	At all ages	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 35	35 to 45	45 to 65	65 and over			
Acute Pneumonia	4	—	—	—	—	1	—	—	—	—	2	1	1	—	3	1
Diphtheria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	6	—	—	—	—	—	—	—	—	—	3	3	—	—	3	3
Food Poisoning	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
Infectious Hepatitis	6	—	—	1	—	4	—	1	—	—	—	—	—	—	4	2
Measles	84	2	7	4	14	34	4	2	2	—	1	—	—	—	39	45
Poliomyelitis	3	—	—	—	—	(1)	—	—	1	(1)	—	—	(2)	—	(1)	2
	(2)														(1)	
Puerperal Pyrexia	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
Scarlet Fever	5	—	—	—	—	5	—	—	—	—	—	—	2	—	2	3
Whooping Cough	17	2	1	4	2	2	6	—	—	—	—	—	—	—	6	11

N.B.—The figures in parenthesis indicate those cases where the diagnosis was corrected.

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